DRAFT
PROGRAM ENVIRONMENTAL IMPACT REORT

FOR THE

INLAND EMPIRE UTILITIES AGENCY
CHINO BASIN PROGRAM (CBP)

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ABBREVIATIONS AND ACRONYMS

A

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ACI	American Concrete Institute
ACM	asbestos-containing materials
ACOE	Army Corps of Engineers
ADT	average daily traffic
AF	acre-feet
AFD	acre-feet per day
AFY or afy	acre-feet per year
AMMS	avoidance and minimization measures
amsl	above mean sea level
AOP	Advanced Oxidation Process
APE	Area of Potential Effect
ASCE	American Society of Civil Engineers
ASR	Aquifer Storage and Recovery
AWPF	Advanced Water Purification Facility
AWQ	ambient water quality

B

Basin Plan	Santa Ana River Basin
BAT	Best Available Technology
bgs	below ground surface
BLM	Bureau of Land Management
BMPs	Best Management Practices
BRA	Biological Resources Assessment
BRMP	Biological Resources Management Plan
BTAC	Basin Technical Advisory Committee
BTU	British Thermal Unit

C

CAA	Clean Air Acts
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officer Association
CARB	California Air Resources Board
CBC	California Building Code
CBFIP	Chino Basin Facilities Improvement Program

CBMWD	Chino Basin Municipal Water District
CBP	Chino Basin Program
CBRP	Comprehensive Bacteria Reduction Plans
CBWCD	Chino Basin Water Conservation District
CBWM	Chino Basin Watermaster
CCAP	Climate Change Action Plan
CCR	California Code of Regulations
CCWF	Chino Creek Well Field
CCWRF	Carbon Canyon Water Recycling Facility
CDA	Chino Basin Desalter Authority
CDFM	cumulative departure from mean
CDFW (CDFG)	California Department of Fish & Wildlife (formerly California Dept. of Fish & Game)
CDPH	California Department of Public Health
CEC	contaminants of emerging concern
CESA	California Endangered Species Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGP	Construction General Permit
CGS	California Geological Survey
CHLs	California Historical Landmarks
CHP	California Highway Patrol
CHPD	Chino Hills Police Department
CHRIS	California Historical Resources Information System
CIWMB	California Integrated Waste Management Board
CML&C	cement mortar lined and coated
CNDBB	California Natural Diversity Database
CNP	California Native Plant Society
COD	chemical oxygen demand
COE	Corps of Engineers
COG	Council of Governments
CPD	Chino Police Department
CPUC	California Public Utilities Commission
CRHP	California Register of Historic Places
CSDP	Comprehensive Storm Drain Plan
CTC	Carbon Tetrachloride
CU	capacity units
CUPA	Certified Unified Program Agency
CVFD	Chino Valley Fire District
CVM	Chino Valley Model
CVWD	Cucamonga Valley Water District

CWA	Clean Water Act
CWC	California Water Commission

D

dB	decibel
dBA	A-weighted decibel
DDW	Division of Drinking Water
DMR	Division of Mine Reclamation
DOC	Department of Conservation
DOD	U.S. Department of Defense
DPM	diesel particulate matter
DPR	direct potable reuse
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
DYYP	Dry-Year Yield Program

E

EIA	Energy Information Administration
EIC	Eastern Information Center
EO	Executive Order
EOP	Emergency Operation Plan
ESA	Endangered Species Act
EV	electric vehicle
EWL	Etiwanda Wastewater Line

F

FBFMs	Flood Boundary and Floodway Maps
FCV	flow control valves
FC	Federal Candidate
FE	Federal Endangered
FEHA	Fair Employment and Housing Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Reduction Commission
FESA	Federal Endangered Species Act
FFD	Fontana Fire District
FHBMs	Flood Hazard Boundary Maps
FHSZ	Fire Hazard Severity Zones
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FMP	Facilities Master Plan
FPD	Fontana Police Department
FRA	Federal Railroad Administration
FT	Federal Threatened
FTIP	Federal Transportation Improvement Program
FUD	Formerly Used Defense Sites

FWC	Fontana Water Company
FY	Fiscal Year

G

GAC	granular activated carbon
GE	General Electric
GHG	Greenhouse Gas
GIS	Geographic Information System
GLMC	Ground Level Monitoring Committee
GMZ	Groundwater Management Zone
GOs	General Orders
gpm	gallons per minute
GSAs	Groundwater Sustainability Agencies
GSPs	Groundwater Sustainability Plans
GWh	gigawatt hours

H

HCL	hydraulic grade line
HCP	Habitat Conservation Plan
HP	horsepower
HAS	Hydrologic Sub-Area
HCD	Housing and Community Development
HMBP	Hazardous Materials Business Plan
HWP	Hazardous Waste Permitting
Hz	Hertz

I

ICC	Inland Communities Center
IEBL	Inland Empire Brine Line
IERCF	Inland Empire Regional Composting Facility
IEUA	Inland Empire Utilities Agency
IGP	Industrial General Permit
IP	Implementation Plan
IPaC	Information for Planning and Consultation
IRP	Integrated Water Resources Plan
ITP	Incidental Take Permit
IX	RO/ion exchange

J

JARPD	Jurupa Area Recreation and Park District
JCSD	Jurupa Community Services District
JOS	Joint Outfall System

L

LACFD	Los Angeles County Fire Department
LACSD	Los Angeles County Sanitation Districts
LBP	lead-based paint
LCLS	Local Storage Limit Solution
LOS	Level of Service
LRA	Local Responsibility Area
LRTP	Long Range Transit Plan
LUC	Land Use Convenant
LUP	linear underground projects

M

MBR	membrane bioreactor
MBTA	Migratory Bird Treaty Act
MCLs	maximum contaminant levels
MF	Membrane Filtration
MFD	Montclair Fire Department
MGD	million gallons per day
MJHMP	Multi-Jurisdictional Hazardous Mitigation Plan
MLD	Most Likely Descendants
MMI	Modified Mercalli Intensity
MPD	Montclair Police Department
MPI	Material Physical Injury
MPO	Metropolitan Planning Organization
MS4s	Municipal Separate Storm Sewer Systems
MSDP	Master Storm Drain Plan
MVWD	Monte Vista Water District
MWD or MWDSC	Metropolitan Water District of Southern California
MWh	megawatt hours
MZ	Management Zone

N

NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NEHRP	National Earthquake Hazard Reduction Program
NFIP	National Flood Insurance Program
NHMLAC	Natural History Museum of Los Angeles County
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NIMS	National Incident Management System
NMFS	National Marine Fisheries Service
NMTP	Non-Motorized Transportation Plan
NOI	Notice of Intent

NPAA	Native Plant Protect Act
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRCS	National Resource Conservation Service
NRF	National Response Framework
NRHP	National Register of Historic Places
NRWS	Non-Reclaimable Wastewater System

O

OBMP	Optimum Basin Management Program
OBMPU	Optimum Basin Management Program Update
OCSD	Orange County Sanitation District
OCWD	Orange County Water District
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
OHP	Office of Historic Preservation
ONT	Ontario International Airport
OPD	Ontario Police Department
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration

P

PAHS	Polycyclic Aromatic Hydrocarbons
PA/SI	Preliminary Assessment / Site Inspection Reports
PBHSP	Prado Basin Habitat Sustainability Program
PBMZ	Prado Basin Management Zone
PCBs	polychlorinated biphenyls
PCE	tetrachlororethene
PEIR	Program Environmental Impact Report
PFAS	per- and polyfluoroalkyl substances
PFOA	perfluorooctnoic acid
PFOS	perfluorooctane sulfonate
PHI	Places of Historical Interest
PHMSA	Pipeline and Hazardous Materials Safety Administration
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
POST	Peace Officer Standards and Training
ppd	pounds per day
PPV	peak particle velocity
PRV	pressure reducing valves

R

RCFPD	Rancho Cucamonga Fire Protection District
RCPD	Rancho Cucamonga Police Department
RCRA	Resource Conservation and Recovery Act

Regional Board	Santa Ana Regional Water Quality Control Board
RHNA	Regional Housing Needs Assessment
RivCoPark	Riverside County Regional Park and Open-Space District
RMP	Risk Management Plan
RMPU	Recharge Maser Urban Plan
RO	reverse osmosis
ROG	reactive organic gases
ROW	Right-of-Way
RP	Regional Plant
RPD	Rialto Police Department
RPS	Renewal Port
RTP/SCS	Regional Transportation Plan / Sustainable Communities Strategies
RWQCB	Regional Water Quality Control Board
RWQCP	Riverside Water Quality Control Plant

S

SAFE	Safer Affordable Fuel-Efficient
SANBAG	San Bernardino Associated Governments
SAR	Santa Ana River
SARA	Superfund Amendments and Reauthorization Act
SARWM	Santa Ana River Watermaster
SASU	Santa Ana Sucker
SAWCo	San Antonio Water Company
SB	Senate Bill
SBCFCD	San Bernardino County Flood Control District
SBCFD	San Bernardino County Fire Department
SBCM	San Bernardino County Museum
SBCSD	San Bernardino County Sheriff's Department
SBCSS	San Bernardino County Superintendent of Schools
SBCTA	San Bernardino County Transit Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCAB	South Coast Air Basin
SCE	Southern California Edison
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCCRA	Southern California Regional Rail Authority
SCH	State Clearinghouse
SDC	Seismic Design Category
SDWA	Safe Drinking Water Act
SFHA	Special Flood Hazard Areas
SFI	Storage Framework Investigation
SGMA	Sustainable Groundwater Management Act
SHMP	State Multi-Hazard Mitigation Plan
SHPO	State Historic Preservation Officer

SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMP	Storage Management Plan
SNMP	Salt-and-Nutrient Management Plan
SoCalGas	Southern California Gas Company
SRA	State Responsibility Area
SSC	Safe Storage Capacity
SSC	Species of Special Concern
ST	State Threatened
SWIS	Solid Waste Information System
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board

T

TAC	toxic air contaminants
TCA	trichlorethane
TCP	trichloropropane
TDH	total dynamic head
TDS	total dissolved solids
TIN	total inorganic nitrogen
TM	Technical Memorandum
TMP	Transportation Management Plan
TOC	total organic carbon
TSS	total suspended solids
TVMWD	Three Valleys Municipal Water District
TYF	ten-year forecast

U

UCMR3	Unregulated Contaminant Monitoring Rule
UFC	Uniform Fire Code
UPD	Upland Police Department
USBR	U.S. Bureau of Reclamation
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UV	ultraviolet

V

VCP	vitrified clay pipe
VMT	vehicle miles traveled
VOC	volatile organic compound

W

WDRs	waste discharge requirements
WECWC	West End Consolidated Water Company
WEI	Wildermuth Environmental, Inc.
WFA	Water Facilities Authority
WMWD	Western Municipal Water District
WOTUS	waters of the United States
WRCRWA	Western Riverside County Regional Wastewater Authority
WRR	Water Recycling Requirements
WSIP	Water Storage Investment Program
WTP	Water Treatment Plant
WY	West Yost

CHAPTER 1 – EXECUTIVE SUMMARY

This Executive Summary for Inland Empire Utilities Agency's (IEUA) proposed Chino Basin Program (CBP) Draft Program Environmental Impact Report (DPEIR) summarizes the potential environmental effects that are forecast to occur from implementation of the proposed project. It also contains a summary of the Project Background, Project Objectives, and Project Description. A table summarizing potentially significant environmental impacts, mitigation measures, and mitigation responsibility is included at the end of this Executive Summary (**Table 1.5-1**). Chapter 2, the Introduction to this DPEIR, also provides information that augments this Executive Summary.

1.1 PROJECT BACKGROUND

IEUA is proposing to develop the CBP, which would provide a regional water resources and groundwater management program for the Chino Basin. The CBP's scope is a revolutionary, first-of-its-kind program designed to help the region move beyond traditional water management practices and into a new era of water use optimization. The CBP promotes proactive investment in managing the water quality of the Chino Groundwater Basin and in meeting regional water supply reliability needs in the face of climate change, while leveraging California's interregional plumbing system and the Chino Basin's future potential for water recycling to produce benefits to local, State, and federal interest.

The CBP was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded $206.9M in conditional funding in July 2018. As a result, the CBP has been developed as a program for which California Environmental Quality Act (CEQA) compliance has been determined to be required in order to implement the proposed conjunctive use program.

Under the WSIP, the CBP is proposed as a 25-year conjunctive use project that would develop and utilize a new advanced water purification facility (AWPF) to treat and store up to 15,000 acre feet per year (AFY) of recycled water in the Chino Basin and extract the water during call years, which will likely be in dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new AWPF and through groundwater storage by operation of new injection wells. The CBP would thereby enable IEUA to dedicate a commensurate amount of this "new" water locally generated from the AWPF to remain in the State Water Project system at Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits.

IEUA's partner and the State Water Project Contractor that will facilitate the exchange for the CBP is Metropolitan Water District of Southern California (MWD). The CBP would produce 15,000 AFY of "new" water supply for a period of 25-years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in hydrologically drier years when pulse flows in the Feather River would provide the most ecosystem benefit and other State Water Project (SWP) operations would not be affected. The exchange would be administered through agreements with the California Department of Water Resources (DWR), the California Department of Fish and Wildlife (CDFW), MWD, and other project partners.

Additionally, new water stored in the Chino Basin would also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic

events that disrupt imported water infrastructure. The infrastructure included in the CBP is consistent with infrastructure identified to reduce recycled water salinity for regulatory compliance as well as water infrastructure that has been identified through IEUA's Integrated Water Resources Plan (IRP) effort.

The CBP would rely on water transfer agreements through MWD. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD (referred to as "in lieu"). MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years. The CBP includes two main categories of facilities: PUT and TAKE components.

The annual PUT (the components to recharge purified water to the Chino Basin) and periodic TAKE cycles (the components to extract groundwater and convey potable water supply) would require the development of various facilities to support the overall CBP. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development (Injection wells, extraction wells, etc.); (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Groundwater Storage Increase; and, (4) Project Category 4: Advanced Water Purification Facility and Other Water Treatment Facilities.

Ultimately, the CBP brings together these components cost-effectively and greatly enhances flexibility and resiliency to regional and local water operations, particularly during future extended droughts expected as climate change continues to impact California. The CBP's proposed AWPF, new injection and extraction facilities, conveyance facilities, and water system interconnections will allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure.

Additionally, the proposed CBP requires an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate an addition of up to 150,000 AF of managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035). As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as Chino Basin Watermaster (Watermaster) stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter. The storage increase would accommodate the CBP during its 25-year planning horizon, and any future required increase in storage that may be necessary to accommodate the increased recharge and extraction capacities provided by CBP infrastructure would be addressed in future CEQA documentation. Overall, the CBP may: reduce dependence on imported water through development of infrastructure that would provide a new local source of water; improve water quality by reducing the expected TDS concentration of the AWPF effluent to 100 mg/L; and

provide a new local water supply for the Basin as a result of the creation of the AWPF that would enable IEUA to continue treating recycled water to below the regulatory limits set by the Santa Ana Regional Water Quality Control Board's (RWQCB) Basin Plan for continued Basin use. This proposed tiered increase would supersede the Safe Storage Capacity that was approved in March of 2021 by the IEUA Board and subsequently approved by the Watermaster in May 2021. Furthermore, as storage space in the Basin is regulated by the Watermaster, a Storage Agreement will be required in order for this proposed Safe Storage Capacity to be adopted.

As the agency that will facilitate implementation of the CBP, IEUA will serve as the Lead Agency for purposes of complying with CEQA. IEUA has prepared the CBP DPEIR as the Lead Agency, in cooperation with the California Department of Water Resources (DWR), the CDFW, State Water Resources Control Board (SWRCB), and MWD as responsible agencies. The California Water Commission (CWC) is a Responsible Agency, as it is the agency that has conditionally awarded IEUA with funding to implement the CBP through the Proposition 1 WSIP. Other agencies that may be Responsible Agencies or Trustee Agencies include IEUA member agencies, listed under Subsection 3.15 of the Project Description.

Pursuant to Section 15060(d) of California's Guidelines for CEQA (Title 14 California Code of Regulations §§ 15000 et seq." "CEQA Guidelines"), upon finding that the proposed CBP might have one or more significant effects on the existing project environment and surrounding environment, IEUA determined that an environmental impact report (EIR) should be prepared to address potential impacts from the CBP. Thus, the information CEQA and the CEQA Guidelines require to be included in an EIR is included in this DPEIR, and it addresses each of the 20 topics identified in Appendix G of the CEQA Guidelines, as follows: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire.

In accordance with Section 15146 of the CEQA Guidelines, the focus of the analysis provided herein addresses the forecast effects of the proposed CBP as presented below in Chapter 3, Project Description. However, it is the combination of authorizations and entitlements requested for this project that must be recommended for approval by IEUA to allow the CBP to be implemented.

1.2 INTENDED USE OF THIS ENVIRONMENTAL IMPACT REPORT

As required by Section 21151 of CEQA, this DPEIR has been prepared in accordance with CEQA and the CEQA Guidelines. IEUA is the Lead Agency for the project and has supervised the preparation of this DPEIR. This DPEIR is an information document which will inform public agency decision makers and the general public of the potential environmental effects, including any significant impacts that may be caused by implementing the proposed project. Possible ways to minimize potential significant effects of the proposed project and reasonable alternatives to the project are also identified in this DPEIR.

This document assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed project. This DPEIR is also intended to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this project. Other California agency approvals (if required) for which this environmental document may be utilized include:

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the RWQCB enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the RWQCB and county providing enforcement oversight.

- The project may include the potential discharge of fill into or alterations of "waters of the United States," "waters of the State," and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the RWQCB, and California Department of Fish and Wildlife (CDFW) over the life of the CBP. A Section 404 permit for the discharge of fill material into "waters of the United States" may be required from the ACOE; a Section 401 Water Quality Certification may be required from the RWQCB; a Report of Waste Discharge may be required from the RWQCB; and a 1600 Streambed Alteration Agreement may be required from the CDFW.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.

- Land use permits may be required from local jurisdictions, such as individual cities and the two counties (Riverside and San Bernardino).

- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD).

- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), flood control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as BNSF Railway Company.

- The Watermaster has a separate approval process for determining material physical injury to the stakeholders within the Chino Basin.

- The SWRCB will be a responsible agency if IEUA requests permits or funding from SWRCB's Clean Water State Revolving Fund program or its Division of Drinking Water.

This is considered to be a partial list of other permitting agencies for future individual CBP projects.

1.3 PROJECT OBJECTIVES

The CBP has identified the following project objectives, which also help address local, State and Federal objectives as follows:

- **Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin**.
- **Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin**.
- **Develop Infrastructure That Addresses Long Term Supply Vulnerabilities**.
- **Provide a Source of Water for Emergency Response**.
- **Develop an Integrated Solution to Produce State and Federal Environmental Benefits**.

1.4 PROJECT APPROVALS

This DPEIR will be used as the information source and CEQA compliance document for the following discretionary actions or recommended approvals by the CEQA lead agency, IEUA. CEQA requires that the IEUA, as the CEQA Lead Agency, consider the environmental information in the project record, including this DPEIR, prior to making a decision regarding whether or not to recommend approval to implement the proposed project. The decision that will be considered by IEUA is whether to approve the CBP defined in Chapter 3 of this document. The CBP has defined two main categories of facilities: PUT, the components to recharge purified water to the Chino Basin, and TAKE, the components to extract groundwater and convey potable water supply. The PUT and TAKE components have been broken into four project categories as defined above and within the Project Description. Alternatively, IEUA can recommend denial of the project as proposed. This DPEIR evaluates the environmental effects as outlined above.

IEUA will serve as the CEQA Lead Agency pursuant to the CEQA Guidelines Section 15051(b)(1). In all future circumstances, IEUA will remain the Lead Agency for the CBP CEQA document. A CEQA Responsible Agency—those defined in Chapter 3, the Project Description of this DPEIR—shall coordinate with IEUA if and when it assumes CEQA Lead Agency status for a future specific project.

This DPEIR has been prepared by Tom Dodson & Associates (TDA), in conjunction with Rincon Consultants, Inc. (Rincon), under contract to IEUA. TDA and Rincon were retained to assist IEUA to perform the independent review of the project required by CEQA before the DPEIR is released. IEUA has reviewed the contents of this DPEIR and concurs with the conclusions and findings contained herein.

1.5 IMPACTS

As noted above, IEUA concluded that an EIR should be prepared to address any potential significant impacts that may result from implementation of the proposed project. Based on data and analysis provided in this DPEIR, it is concluded that the proposed CBO could result in potentially significant adverse environmental impacts to the following environmental issues: ***Biological Resources, Greenhouse Gas, and Utilities and Service Systems***. All other potential impacts were determined to be less than significant without mitigation or can be reduced to a less than significant level with implementation of the mitigation measures identified in this DPEIR. Note that the cumulative significant impacts are identified in this DPEIR based on findings that the project's contributions to such impacts are considered to be cumulatively considerable which is the threshold identified in CEQA Guidelines Section 15130. **Table 1.5-1** summarizes all of the environmental impacts and proposed mitigation and monitoring measures identified in this DPEIR and will be provided to the decision-makers and the public prior to finalizing the DPEIR.

The following issues evaluated in the DPEIR have been determined to experience less than significant impacts—either with or without mitigation—based on the facts, analysis and findings in this DPEIR.

Aesthetics: As described in Subchapter 4.2, all potential aesthetic impacts associated with the CBP can be mitigated to a less than significant impact level. Mitigation measures would: minimize impacts to scenic vistas through enforcing future projects to meet local design standards; minimize impacts to scenic resources through avoidance of such resources, or through assessment in subsequent CEQA documentation; minimize impacts to scenic resources such as trees through enforcement of compliance with local jurisdiction tree ordinance(s); minimize conflicts with regulations governing scenic quality through enforcing compliance with applicable zoning code and design requirements established by local jurisdictions; and, minimize light and glare impacts by enforcing local jurisdiction light and glare minimization standards. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to aesthetics from implementing the project as proposed.

Agriculture & Forestry Resources: As described in Subchapter 4.3, due to the substantial agricultural resources located within Chino Basin, installation of future CBP related facilities were determined to have a potentially significant impact to such resources; however, mitigation was identified to minimize agricultural and forestry resource impacts below significance thresholds including those that would: relocate or avoid impacts to important agricultural land; and relocate or avoid impacts to forest land or offset the loss by purchasing compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank. As described in Subchapter 4.3, no unavoidable significant impact to agricultural or forestry resources will result from implementing the proposed project.

Air Quality: As described in Subchapter 4.4, with the implementation of mitigation, construction of the proposed project would reduce impacts for all criteria pollutants below South Coast Air Quality Management District (SCAQMD) significance thresholds. Additionally, the regional operational emissions that would result from CBP implementation would be less than significant without the need for mitigation. Furthermore, the CBP would be consistent with the SCAQMD 2016 Air Quality Management Plan (AQMP), and as such would not result in or cause National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) violations. Construction- and operation-source emissions would not exceed the applicable SCAQMD Localized Significance Thresholds and would be less than significant. Mitigation measures would: require IEUA's contractor(s) to use off-road equipment that meets the U.S. EPA certified Tier 4 Final engines, or engines that are certified to meet or exceed the emission ratings for U.S. EPA Tier 4 Final or Interim engines, such that average daily nitrogen oxide (NOX) emissions are verified to be below the SCAQMD regional significance threshold of 100 pounds per day. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to air quality from implementing the project as proposed.

Cultural Resources: As described in Subchapter 4.6, the Chino Basin is a large area that may contain historical, archaeological, or paleontological resources. As such, future CBP projects may be developed within sites that contain such resources. Since the proposed project is at the programmatic level, specific locations for most of the proposed CBP projects have not yet been determined, though a site specific report was prepared to address the potential for resources at RP-4, at which the AWPF is proposed to be installed. This site specific report determined that no significant resources are anticipated to be located within this site, and with implementation of mitigation, impacts to cultural resources at this site would be less than significant. Mitigation has

been identified to minimize impacts to cultural resources at future CBP facilities, including those that would: exclude highly disturbed sites from requiring further cultural resource evaluation except to adhere to procedures pertaining to the treatment of accidental discoveries, unless IEUA is seeking State funding for the project; ensure that future CBP projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or IEUA is seeking State funding, will require a follow on Phase I Cultural Resources Investigation and enforce several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located; ensure that a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM for projects containing cultural resources; and, set a precedent for future CBP projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. As described in Subchapter 4.6, no unavoidable significant impact to cultural resources will result from implementing the proposed project.

Energy: As discussed in Subchapter 4.7, CBP construction and operation would not result in inefficient, wasteful or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This is because the CBP would result in an overall net reduction in electricity consumption associated with local water supplies over the 25-year term of the proposed water transfer agreement. Impacts would be less than significant without the need for added mitigation. The CBP would replace imported SWP water, which is energy-intensive, with a local, recycled water source in call years. Furthermore, IEUA would procure energy to serve CBP facilities from SCE, which has historically achieved the State's Renewables Portfolio Standard (RPS) program and anticipates meeting the RPS of 60 percent renewable energy by 2030. IEUA would also explore options for using additional on-site renewable energy, and therefore the CBP would not obstruct the 2017 Scoping Plan. Impacts would be less than significant. Additionally, the CBP would support the IEUA Climate Change Action Plan (CCAP) objective to strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources. With compliance with current federal and State regulations pertaining to energy conservation, the proposed CBP is anticipated to have a less than significant impact on energy demand and resources.

Geology and Soils: The Chino Basin contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future CBP related facilities in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the CBP was identified in Subchapter 4.8. However, several mitigation measures were identified to minimize geology and soils impacts including those that would: ensure new facilities are located outside of delineated fault zones through relocation, implementation of seismic design measures, or subsequent CEQA documentation; reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation; ensure that the proposed facilities associated with the CBP that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs; minimize impacts to paleontological resources through requiring site-specific studies, where necessary. As described in Subchapter 4.8, no unavoidable significant impact to geology and soils will result from implementing the proposed project.

Hazards and Hazardous Materials: The Chino Basin contains substantial hazards and hazardous materials issue constraints. Due to these substantial constraints and the installation of future CBP infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the CBP were identified in Subchapter 4.10. However, several mitigation measures were identified to minimize hazards and hazardous materials impacts including those that would: ensure that applicable CBP facilities Business Plans incorporate best management practices designed to minimize the potential for accidental release of such chemicals; ensure that applicable CBP facilities Business Plans identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material; ensure sensitive receptors will not be exposed to significant health threat by modeling the pathways of release and implementing specific measures that would minimize potential exposure to acutely hazardous materials; ensure hazardous materials are disposed of and delivered to licensed facilities; ensure the establishment of and adherence to specific thresholds of acceptable clean-up of hazardous materials; ensure the preparation of and adherence to vector management plans; ensure remediation of an accidental spill or discharge of hazardous material in compliance with State and local regulations; ensure that sites for future CBP facilities obtain a Phase I Environmental Site Assessment and either avoid or remediate a site that is contaminated; ensure that any unknown contamination is remediated and handled according to the local CUPA; ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area; ensure that construction traffic is managed safely; and, ensure that fire hazard reduction measures are enforced. Therefore, though there will be some adverse impacts as a result of implementing the project, specific mitigation measures have been identified to reduce potential project specific and cumulative (direct and indirect) impacts to a less than significant level for hazards and hazardous material issues. Thus, the project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts.

Hydrology and Water Quality: As described in Subchapter 4.11, the overall hydrology (watershed, drainage and flood hazards) and water quality impacts that would result from implementation of the CBP could be significant without the implementation of mitigation measures. As such, several mitigation measures were identified to minimize impacts related to hydrology and water quality, such as those that would: ensure that the Watermaster reviews IEUA's storage and recovery program application and gathers the appropriate data to (1) determine whether future CBP projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, and/or result in new subsidence, and (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a project; address the plan of response by the Watermaster should Chino Basin conditions vary from the projections that have been modeled as part of the CBP (and all supporting documentation); require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the Construction General Permit and Stormwater Pollution Prevention Plan, which are required for larger projects; ensure that drainage is managed through either runoff collection or development of a drainage plan for a given CBP project; require CBP projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites; require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future CBP facility sites; and, ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. Therefore, though there will be some adverse impacts as a result of implementing the project, specific mitigation measures have been identified to reduce potential project specific and cumulative (direct and indirect) effects to

a less than significant impact level for hydrology and water quality issues. Thus, the project is not forecast to cause any unavoidable significant adverse hydrology and water quality impacts.

Land Use and Planning: As described in Subchapter 4.12, impacts related to land use and planning are minimal; however, mitigation is provided to address the potential for conflicts with land use from CBP related facilities. This mitigation would ensure that the facilities associated with the CBP are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. With implementation of this mitigation measure, the project-related land use and planning impacts can be reduced below a level of significance, and as such, the proposed project will not cause unavoidable significant land use and planning impacts.

Mineral Resources: As described in Subchapter 4.13, limited mineral resources occur in the northern portion of the Chino Basin. As such, there is a nominal potential for future CBP facilities to be installed within a mineral resource zone. However, mitigation has been identified to minimize mineral resource impacts that would ensure that the proposed facilities associated with the CBP would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources. With implementation of mitigation, project-related mineral resource impacts can be reduced below a level of significance, and as such, the proposed project will not cause unavoidable significant mineral resource impacts.

Noise: The Chino Basin contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints and the installation of future noise-producing CBP facilities in locations where such noise sensitive uses may exist, a potential exists for significant noise impacts from implementation of the CBP. However, several mitigation measures were identified to minimize noise impacts, including those that would: ensure construction noise minimization practices are in place; ensure that construction noise studies are conducted for specific CBP projects; ensure that construction noise and vibration reduction measures are implemented where identified in the site specific noise study, and where project-level construction noise cannot be reduced below significance thresholds, IEUA shall seek a variance from the local noise ordinance prior to initiating construction; ensure operational noise studies are conducted for specific CBP project sites with operational noise reduction measures implemented, where applicable, and ensure that where operational noise cannot be reduced to below significance thresholds at a specific site, an alternative location is selected or subsequent CEQA documentation shall be performed; ensure that vibration generating equipment operate outside of the minimum distances from sensitive receivers; ensure that minimal-vibration-producing equipment is used near historic structures; and, where construction must occur outside of the specified buffer distance intended to minimize construction related vibration, mitigation is implemented, where vibration levels cannot be reduced to below significance thresholds, an alternative location is selected or subsequent CEQA documentation shall be performed. With implementation of these mitigation measures, the project-related noise impacts can be reduced to a less than significant impact level.

Population and Housing: As described in Subchapter 4.15, implementation of the CBP would not significantly induce growth within the Chino Basin; however, mitigation is provided to address the potential for CBP related facilities to displace housing and/or persons. This mitigation would ensure that the facilities associated with the CBP that are located on parcels containing housing would be minimized through the provision of short- and long-term housing of comparable quality, thereby minimizing impacts below significance thresholds. With implementation of this mitigation measure, the project-related population and housing impacts can be reduced below significance

thresholds, and as such, the proposed project will not cause unavoidable significant population and housing impacts.

Public Services: As described in Subchapter 4.16, implementation of the CBP would not significantly impact fire protection, police protection schools, recreation/parks or other public facilities. However, several mitigation measures were identified to minimize impacts to police protection and recreation/parks including those that would: minimize the potential for trespass that could exacerbate demand for police protection services; and, minimize the potential for loss of park or recreational facilities as a result of CBP projects through relocation or provision of supplemental parkland or recreation facilities. With implementation of these mitigation measure, the project-related police protection and park/recreation impacts can be reduced to a less than significant impact level.

Recreation: As described in Subchapter 4.17, implementation of the CBP would not significantly impact recreation. However, mitigation identified under Public Services that would minimize the potential for loss of park or recreational facilities as a result of CBP projects would minimize impacts under this issue as well. Furthermore, mitigation is provided to ensure that, should construction of recreation or park facilities be required as a part of the CBP, a subsequent CEQA determination will be prepared to ensure that impacts are appropriately assessed and mitigated. With implementation of this mitigation measure, the project-related recreation impacts can be reduced below the level of significance, and as such, the proposed project will not cause unavoidable significant recreation impacts.

Transportation: Since transportation system facilities occur throughout much of the Chino Basin and the installation of future water infrastructure facilities can directly impact roadways or traffic on such roadways, a potential for significant transportation/traffic impacts from implementation of the CBP was identified in Subchapter 4.18. Mitigation was identified to minimize impacts to transportation that would reduce the project's potential construction traffic impacts by requiring all construction activities to be conducted in accordance with an approved construction traffic management plan. With implementation of this mitigation measure, the project-related transportation impacts can be reduced below the level of significance, and as such, the proposed project will not cause unavoidable significant recreation impacts.

Tribal Cultural Resources: As described in Subchapter 4.19 of this DPEIR, the San Manuel Band of Mission Indians requested continued participation with this project's CEQA process and future project implemented under the CBP. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures, impacts to Tribal Cultural Resources are considered less that significant. The mitigation measures provide a hierarchy from which to approach future CBP projects, involving (1) notification to the three tribes at project sites that have been totally disturbed; (2) at undisturbed project sites, AB 52 consultation will be initiated and a records search shall be performed as part of a site specific Phase I evaluation, and the site shall be surveyed; and (3) further site-specific study of large scale projects, tribal and archaeological monitoring, and , and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects. Thus, with implementation of mitigation to protect tribal cultural resources, the project would not cause significant unavoidable adverse impacts to tribal cultural resources.

Wildfire: The location of CBP facilities would likely not be located in designated very high fire hazard severity zones, but since many of the proposed CBP facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. Mitigation was identified to minimize impacts to wildfire (gathered from other sections of the IS) that would: reduce the project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan; and, ensure fire hazard reduction measures are incorporated into a fire management plan/fuel modification plan for the proposed facility. Thus, with implementation of mitigation to minimize wildfire impacts, the project would not cause significant unavoidable adverse impacts under wildfire.

The proposed project could result in significant impacts to the following environmental issues: Biological Resources, Greenhouse Gas, and Utilities and Service Systems, based on the facts, analysis and findings in this DPEIR.

Biological Resources: As described in Subchapter 4.3, development of the CBP, because the specific locations for future CBP projects are not presently known, there is a potential that a future CBP facility may be developed in an area containing significant biological resources that cannot be avoided. Substantial mitigation is provided to minimize impacts such that, a future CBP facility would not be developed in an area containing significant biological resources that cannot be avoided. However, it has been determined that even with the implementation of substantial mitigation measures to avoid contributing to cumulatively considerable impacts to covered species and supporting habitat, which can be mitigated by implementing the HCP, impacts to one species cannot be completely avoided. The proposed CBP project operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordnances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. Thus, the proposed project is forecast to cause significant unavoidable adverse impact to biological resources, specifically implementation of the CBP will contribute cumulatively to potential significant impacts to the Santa Ana Sucker due to the reduction in cumulative flows to the Santa Ana River.

Greenhouse Gas: As described in Subchapter 4.9, implementation of the proposed CBP is projected to result in a net decrease of approximately 15,753 MT of CO_2e in call years, while under a non-call year scenario the CBP would emit an estimated 6,435 MT of CO_2e. In total, operation of the CBP would result in a net reduction in greenhouse gas (GHG) emissions of approximately 5,535 MT of CO_2e (including the reduction from offsetting SWP imports) over the 25-year term of the proposed water transfer agreements. As a result of the uncertainty surrounding the future power mix and energy demands of the proposed CBP, the CBP would potentially fail to procure its electricity from carbon-neutral electricity sources by 2045. Therefore, the long-term, indirect impacts of the CBP's operational GHG emissions would be potentially significant in both call and non-call years. Implementation of mitigation that would ensure that IEUA implement all feasible GHG reduction measures during operations is required, but does not reduce operations-related emissions below significance thresholds. Additionally, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. As such, while mitigation ensuring IEUA implements all feasible GHG reduction measures during operations would minimize impacts to the greatest extent feasible, construction-related impacts from implementation of the proposed CBP would be potentially significant. Thus,

exceedances of applicable SCAQMD regional thresholds are considered significant and unavoidable, and the construction and operation of the proposed project could create a significant cumulative impact to global climate change.

Utilities and Service Systems: Subchapter 4.20 concluded that implementation of the CBP would not significantly impact stormwater drainage, energy, natural gas telecommunications, or solid waste. Additionally, mitigation is required to minimize impacts related to stormwater through implementation of a drainage plan to reduce downstream flows for future CBP projects. Mitigation is required to address potential impacts related to solid waste including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities; and ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycling and ultimately reuse, thereby diverting this waste stream from the local landfill. The construction of infrastructure related to energy and natural gas was analyzed and determined to be less than significant with the implementation of mitigation. This mitigation would ensure that CBP projects not located in an area containing adjacent access to electricity and natural gas infrastructure would require subsequent CEQA documentation. With implementation of this mitigation the proposed project will not cause unavoidable significant adverse impacts to energy or natural gas. The construction of infrastructure related to telecommunications was determined to be less than significant with the implementation of mitigation. This mitigation would ensure that CBP projects not located in an area containing adjacent access to telecommunication infrastructure would require subsequent CEQA documentation. With implementation of this mitigation the proposed project will not cause unavoidable significant adverse impacts to telecommunications.

Based on the facts and findings presented in the DPEIR analysis, the proposed project will not cause unavoidable significant adverse impacts to stormwater drainage, energy, natural gas, telecommunications, or solid waste.

The topic of water and wastewater infrastructure were also discussed in Subchapter 4.20. The extension of water and wastewater related infrastructure was determined to be potentially significant. However, the provision of sufficient water supply within the Chino Basin was determined to be less than significant with the implementation of mitigation that would minimize impacts related to loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, and/or result in new subsidence. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties[1] within the Chino Basin. The mitigation is extracted from Subchapter 4.11, Hydrology and Water Quality (discussed above) and would create a hierarchy of checks and balances as part of the sustainable management of the Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact. Additionally, the provision of sufficient wastewater treatment capacity at area wastewater treatment plants would be ensured through mitigation that would ensure subsequent CEQA documentation is required where the overall CBP would require greater brine conveyance capacity than area brine disposal facilities can accommodate. As such, impacts related to wastewater treatment capacities at area and regional facilities would be less than significant with the implementation of mitigation.

[1] The Chino Basin Watermaster functions as a unique entity that has been created by the court. Basin Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. These entities are collectively known as the Chino Basin Parties or stakeholders.

However, as discussed under Subchapter 4.20 of this DPEIR, the proposed CBP could result in significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030 that would result from the extension of water- and wastewater-related infrastructure. Such construction of the CBP has the potential to hinder statewide GHG emissions targets, and therefore the proposed CBP could result in significant and unavoidable GHG impacts related to construction of new or expansion or modifications to existing water and wastewater facilities.

The Executive Summary of potential project impacts is presented in **Table 1.5-1**.

1.6 ALTERNATIVES

The CEQA and the CEQA Guidelines require an evaluation of alternatives to the proposed action. Section 15126 of the CEQA Guidelines indicates that the "discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of not significant...." The CEQA Guidelines also state that "a range of reasonable alternatives to the project … which could feasibly attain the basic objectives of the project" and that "[t]he range of alternatives required in an EIR is governed by 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The detailed analyses of the alternatives evaluated are provided in Chapter 5 of this DPEIR and addresses those alternatives for feasibility and a range of alternatives required to permit decision-makers and the public a reasoned choice among the alternatives. Refer to **Table 1.6-1** below for a tabular comparison of alternatives.

The proposed project's objectives are to meet permit compliance for the continued use of recycled water in the Chino Basin, maintain commitments for salt management to enable sustainable use of recycled water in the Basin, develop infrastructure that addresses long term supply vulnerabilities, provide a source of water for emergency response, and develop an integrated solution to produce State and federal environmental benefits. In this instance the DPEIR analysis in Chapter 4 has reached a finding that there are three issues—***Biological Resources, Greenhouse Gas, and Utilities and Service Systems***—with unavoidable significant adverse effects from implementing the project as proposed in Chapter 3, the Project Description.

The "No Project Alternative" that CEQA and the CEQA Guidelines require to be included in every EIR is not environmentally superior to the proposed CBP. In an effort to reduce the proposed project impacts to a less than significant level, the two alternatives brought forward for further close evaluation in this DPEIR besides the No Project Alternative are the "Baseline Compliance Plan Alternative" and the "Regional Water Quality and Reliability Plan Alternative."

1.6.1 No Project Alternative

One of the alternatives that must be evaluated in an EIR is the "no project alternative," regardless of whether it is a feasible alternative to the proposed project, i.e., would meet any, some, or all of the project's objectives or requirements. In this case, this Subsection evaluates a No Project Alternative that reflects a "no action" alternative that makes salient the potential impacts and practical results redounding from IEUA not approving the CBP and taking no actions to resolve regulatory compliance issues within the Basin from continued recycled water use.

Under this alternative, the environmental impacts that would occur if the CBP facilities and programs are not implemented are evaluated. Under this No Project Alternative, there would be no expansion of existing recycled water systems or groundwater by member agencies of IEUA. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand.

Analysis performed to date indicates that IEUA could exceed the NPDES TDS permit limits for recycled water within the next 10 years, and possibly the groundwater recharge permit limit in the near future if no actions are taken. Maintaining permit compliance is critical for IEUA. There are strict consequences associated with non-compliance with the maximum benefit commitments (i.e., failure to develop the required mitigation plans when the action limits are triggered) that could lead to recycled water and groundwater recharge program interruption and/or retroactive activities. If the NPDES permit limit is exceeded, IEUA will be in violation of its NPDES permit and if a plan to address it is not submitted to the Santa Ana Regional Water Quality Control Board (RWQCB) in a timely manner, this could result in the halting of all use of recycled water. Consequently, all effluent from IEUA's water recycling facilities will need to be discharged to the Santa Ana River. Discharge to the Santa Ana River above 550 mg/L will also be above the discharge limitation, which is also 550 mg/L. The Basin Plan also states that "The Regional Board will also require mitigation of any adverse effects on water quality downstream of the Chino Basin that result from failure to implement the 'maximum benefit' commitments." Non-compliance could result in permit modification with more stringent recycled water and groundwater recharge limits, severely impacting both the operability of the programs as well as the costs.

Unmitigated use and recharge of recycled water in the Chino Basin is contingent upon compliance with the maximum benefit objectives established by the RWQCB and agreed to by IEUA. If compliance is not demonstrated, lower, more stringent limits consistent with the State and federal anti-degradation objectives would apply. These lower limits effectively prohibit use of recycled water at worst or require a combination of purchase of dedicated State Water Project (SWP) supplies with low TDS from MWD and treatment to reduce TDS concentrations at best. TDS management within Chino Basin is thus critical to ensure continued use of recycled water and reduce reliance on imported water within IEUA's service area.

During 2019, recycled water used for groundwater recharge exceeded the 1,2,3-Trichloropropane (1,2,3-TCP) maximum contaminant level and perfluorooctanoic acid (PFOA) Notification Level and went into an accelerated monitoring schedule for 16 consecutive weeks. Corrective action reports were submitted to the State Water Resources Control Board's Division of Drinking Water and RWQCB in February 2020. Source evaluation for both compounds is ongoing.

Advanced treatment may be required to address impending/future regulations for 1,2,3-TCP and perfluorooctanoic acid PFOA. There are other contaminants of emerging concern, such as microplastics, that are likely to emerge over the next 10 years and could also require advanced treatment to continue recharge of recycled water. Even if these facilities are not required to maintain compliance with the Basin Plan, they may be needed to treat recycled water to continue current and for future groundwater recharge.

There is little flexibility to respond and manage changes in TDS concentration due to drought conditions, and the timeframe by which drought conditions can impact recycled water TDS concentration is short. Expected recycled water TDS concentration is 500 mg/L, considering contributions from household use and treatment processes and imported water. In periods of

drought, recycled water TDS concentration is susceptible to increases, with imported water TDS concentration reaching up to 400 mg/L, and the desalter operating at 350 mg/L. Although statistical models considered long-term trends based on data sets of 20+ years and historical drought patterns, significant potential drivers, such as climate change, are not evaluated in these projections. These potential drivers further support the need for salinity management within the next 10 years.

If the ambient water quality in the Chino Basin is not maintained per the RWQCB's TDS limit, there will be greater dependence on imported water and local stormwater supplies, which are highly volatile and impacted by climate change. Since the Basin only receives imported water from one regional pipeline that is owned and operated by MWD, an unplanned or catastrophic occurrence could cut off 25 percent of the Basin's water supply. The No Project Alternative's no action approach would result in the Basin being out of regulatory compliance, threaten water supply, and does not meet IEUA's objectives.

As such, and as required by CEQA, a second, reduced development, alternative that also meets the requirements of analyzing a "no project" alternative is provided below as the Baseline Compliance Plan Alternative. The reason for distinguishing these two alternatives is that for IEUA to take "no action" towards maintaining regulatory compliance means that at some point it will be out of compliance and ultimately, in order for IEUA to continue its operations, an advanced water purification facility would be required in order to comply with its RWQCB permits. As such, the following alternatives discussion reflects the environmental consequences of a true "no action" alternative—henceforth called the No Project Alternative or NPA—while the Baseline Compliance Plan Alternative or BCPA, identified below as Alternative 1, would meet the provisions of CEQA Guidelines Section 15126.6(e)(3)(A) and (B), which requires the "no project" alternative to proceed as applicable to a given project as follows:

(A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically, this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

(B) … However, where the failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval… ."

As such, given that it is reasonably foreseeable that without implementation of the CBP, actions will need to be taken to ensure that IEUA remain in regulatory compliance through their continued operations, the Baseline Compliance Plan Alternative (Alternative 1), is provided to address this requirement.

1.6.2 Alternative 1: Baseline Compliance Plan Alternative

Issues of rising TDS concentrations in recycled water nearing compliance levels and other regulatory challenges associated with contaminants of emerging concern puts the region at great risk. IEUA and its partners have invested significant time and money in identifying solutions to address these challenges. Though there are a number of solutions that IEUA could implement to address the groundwater recharge challenges associated with TDS and contaminants of

emerging concern, none are as optimal as the implementation of advanced water purification. The Baseline Compliance Plan Alternative (BCPA) would address TDS levels for both direct use of recycled water and groundwater recharge and could also help address the challenges associated with Title 22 regulations. The BCPA considers a centrally located advanced water purification system can be linked with the existing distribution system providing greater flexibility for use of the advanced treated water, providing greater benefit to the region as an available supply and solutions for brine discharge that are more economically feasible. Also, it has the potential to be integrated in the future as direct potable reuse when such regulations are adopted.

As discussed above under Subsection 5.3, the reduced development BCPA has been included in this DPEIR in accordance with CEQA Guidelines Section 15126.6(e)(3)(A) and (B). Given that it is reasonably foreseeable that, without the implementation of the CBP, actions will need to be taken to ensure that IEUA remains in regulatory compliance through its continued operations, the BCPA (Alternative 1), is provided to address this foreseeable result.

Under Alternative 1, the BCPA, centrally located advanced water purification facilities will be used with IEUA's existing conveyance system to help address the region's regulatory compliance challenges. The expected effluent TDS concentration from the AWPF is 100 mg/L. The AWPF would have a capacity comparable to that which is proposed by the CBP, and similarly, would be located at RP-4. This low-TDS recycled water could be used to meet discharge obligations to the Santa Ana River, or for blending into IEUA's existing recycled water distribution system using existing conveyance, significantly reducing recycled water TDS concentrations. Once blended into IEUA's recycled water distribution system, the augmented recycled water supply could be used for groundwater recharge or for indirect potable use.

The BCPA would include a 15,000 AFY AWPF, a new 1,500 horsepower (HP) pump station at RP-4, and 1,400 lineal feet (LF) of 8-inch brine pipeline. These facilities would be phased with 9,000 AFY online by 2030 and the remaining 6,000 AFY by 2040. TAKE facilities are those that are associated with the extraction of groundwater from the Chino Basin and the conveyance of potable water supply. Alternative 1 does not include any TAKE facilities. Alternative 1 is only designed to meet water quality related regulatory challenges and does not include infrastructure to enhance regional water supply. As a result, Alternative 1 provides water quality benefits to IEUA and the region, but no water supply, ecosystem, or emergency supply benefits are realized through Alternative 1.

1.6.3 Alternative 2: Regional Water Quality and Reliability Plan Alternative

Alternative 2, the Regional Water Quality and Reliability Plan, builds upon the Baseline Compliance Plan Alternative to address regional water quality and water supply challenges. PUT facilities for the Regional Water Quality and Reliability Plan Alternative include an AWPF, injection wells, purified water conveyance facilities, and brine conveyance. The Regional Water Quality and Reliability Plan Alternative includes the same AWPF, pump station, 6,000 AFY of additional external supplies, and brine conveyance pipelines as the Baseline Compliance Plan Alternative. These facilities would not be phased, and the full 15,000 AFY capacity would be on-line by 2030. Additionally, the Regional Water Quality and Reliability Plan Alternative would introduce purified water pipelines, and groundwater injection facilities, including 16 injection wells.

The Regional Water Quality and Reliability Plan would require TAKE facilities, including extraction wells, groundwater treatment facilities, pipelines, and connections that are integrated with the AWPF and injection well system. These facilities would collectively provide an extraction capacity

of 15,000 AFY to support a delivered water capacity used to help address water supply challenges in the region. The extraction wells needed to support this capacity are assumed to be comparable to the extraction wells identified for the CBP designed to recharge up to 50,000 AFY. Furthermore, this alternative does not require connections to MWD's water distribution system as is the case for the proposed CBP project.

The Regional Water Quality and Reliability Plan would collectively treat and store up to 15,000 AFY of recycled water in the Chino Groundwater Basin, creating a new local water supply. This water will be available for local use for the 50-year project life of the alternative, therefore reducing dependence on imported water, improving water quality, and providing a new local water supply for the Basin. The Regional Water Quality and Reliability Plan would include a network of regional pipelines that would provide the ability for IEUA and its member agencies to access stored water in the Chino Groundwater Basin, connecting these new potable water supplies for use in lieu of planned water deliveries from MWD. These new water conveyance and water system interconnections also provide an important alternative source of water supply to IEUA and its member agencies during any required shutdown of MWD's major pipelines delivering water to the region, such as the Rialto Pipeline, which is planned for rehabilitation as part of a larger rehabilitation plan of MWD's pipelines within its service area.

The production of high-quality water in the Chino Groundwater Basin will deliver regional benefits in the form of enhanced water quality. The Regional Water Quality and Reliability Plan will also deliver regional benefits in the form of local water supply benefits available annually to offset the cost of imported water from MWD as well as to reduce the economic impact of supply shortages when MWD is unable to deliver full water supplies.

In addition, the Regional Water Quality and Reliability Plan provides local emergency supply benefits in years when planned or unplanned service disruptions occur.

1.6.4 Discussion

The "no action" No Project Alternative (NPA) analyzed above would ultimately not be a feasible as it would lead to IEUA having to take actions in order to comply with mandatory regulatory requirements in order to continue operating as usual. As such, the NPA analyzed above would neither be feasible nor would it meet the fundamental project objectives outlined in the CBP Project Description. Specifically, the NPA would not meet permit compliance for continued use of recycled water in the Basin, nor would it maintain commitments for salt management to enable sustainable use of recycled water in the Basin. Neither would it address long-term supply vulnerabilities or provide a source of water for emergency response. The NPA generally has lessened environmental impacts for all of the resource issues except for hydrology and water quality issues. The NPA would reduce significant biological resource and greenhouse gas impacts from a significant impact under the CBP to a level of less than significant. The NPA is forecast to result in a new significant unavoidable adverse impacts to hydrology and water quality, and would cause greater significant unavoidable adverse impacts under utilities and service systems than the CBP. Further, although the NPA would reduce potentially significant impacts identified in this DPEIR as compared to the proposed CBP, it would lead to greater impacts in some other areas, including hydrology and water quality and utilities and service systems. This is because the NPA would result in the Chino Basin being out of regulatory compliance and would threaten water supply. In the final analysis, the NPA clearly cannot be considered the environmentally superior alternative to the proposed project from a total environmental standpoint, because the

environmental damage from implementing it is forecast to cause a significant adverse impact when compared to implementing CBP.

Finally, under the NPA, the ability to attain the goals and objectives as described under Chapter 3, Project Description, and listed in the paragraph above, would be virtually eliminated. The No Project Alternative would not obtain the Project's basic objectives, and furthermore, although the NPA would reduce potentially significant impacts identified in this DPEIR as compared to the proposed Project, it would lead to greater impacts in some other areas, including hydrology and water quality and utilities and service systems. It should also be noted that the NPA would eliminate significant environmental benefits that would result from the CBP. As discussed in Chapter 3 of this DPEIR, the CBP would provide environmental benefit in call years, which will likely be in dry seasons, to improve Feather River habitat conditions and enable salmonid species greater chance for survival. The NPA would not only forgo this environmental benefit, but it would also result in a threat to the reliability of water supply in the Chino Basin.

In sum the NPA cannot be considered an environmentally superior alternative to the proposed CBP project from a total environmental standpoint because the environmental downsides of the NPA are overall more consequential than those that could result from implementing CBP.

CEQA Guidelines Section 15126.6(b), indicates that a range of reasonable alternatives must be developed and considered by the lead agency. Elimination of potential environmental impacts of the proposed project should be considered when developing potential alternatives. As evaluated in Chapter 2 of this EIR, the potentially significant impacts of the Proposed Project are: Biological Resources, Greenhouse Gas, and Utilities and Service Systems.

The practical result of IEUA not approving the CBP would be IEUA at some point having to build a reduced development project like the Baseline Compliance Plan Alternative (BCPA; Alternative 1), as a way to provide the facilities required in order for the use of recycled water in the Chino Basin to continue under current permits and regulations. The reduced development BCPA, which as noted above is basically a "practical result" no project alternative, would lessen environmental impacts in all categories to a level of less than significant, though it could continue to contribute to potentially significant operational Greenhouse Gas emissions. This is because, while it is likely that electricity would be procured from carbon-neutral electricity sources by 2045, because of the uncertainty surrounding the future power mix and energy demands, this assumption is not guaranteed, and therefore, it is possible that a significant operations-related GHG impact could occur should the future power mix fail to meet the carbon-neutral electricity requirement by 2045. The BCPA would not require as intensive construction as the CBP as it does not propose the same intensity of facilities proposed by the CBP. As such, the BCPA would not create any new significant impacts beyond those identified by the CBP and result in lessened environmental impacts compared to the CBP. The BCPA would also avoid Biological Resources and Utilities and Service Systems significant impacts, although potentially significant operations related Greenhouse Gas impacts could still occur under it. As such, the BCPA is considered an environmentally superior alternative to the CBP.

However, the BCPA would not achieve several of the CBP's basic objectives. While the BCPA would meet permit compliance for the continued use of recycled water in the Chino Basin and would maintain commitments for salt management to enable sustainable use of recycled water in the Basin, the BCPA would not develop infrastructure that addresses long term supply vulnerabilities, provide a source of water for emergency response, or develop an integrated solution to produce State and federal environmental benefits.

The Regional Water Quality and Reliability Plan Alternative (Alternative 2) is comparable to the CBP in terms of environmental impacts. Because Alternative 2 would result in the development of nearly identical facilities to the CBP, excepting those which the CBP requires in order to connect to MWD's water distribution system, most of the impacts related to Alternative 2 are the same as those identified under the CBP. It is possible that, due to reduction in pipeline lengths and turnouts required under Alternative 2 when compared to the CBP, the construction related GHG emissions impact would be eliminated, but given the comparable construction scenarios, the elimination of this construction related GHG impact is not guaranteed. However, because Alternative 2 would not result in offset electricity consumption that would redound from the water exchange with the SWP created by the CBP, it is likely the Alternative 2 would result in greater GHG emissions than would the CBP, and as such would not eliminate operations related GHG impact. Note that Alternative 2 would ultimately reduce reliance on imported water; thus, some of the energy related GHG emissions that may result from operation of Alternative 2 facilities would ultimately be offset by reducing reliance on the energy intensive imported water source. Regardless, Alternative 2 would result in a significant operations-related GHG emissions impact. Furthermore, Alternative 2 would not eliminate significant Biological Resources or Utilities and Service Systems impacts. As such, while Alternative 2 would lessen significant impacts under GHG, it would not eliminate significant impacts under any of the categories for which significant impacts have been identified under the CBP. Therefore, Alternative 2 cannot be considered an environmentally superior alternative to the CBP.

Furthermore, while Alternative 2 would meet nearly all of the CBP's objectives, it would not meet one of the IEUA's basic objectives, which is to develop an integrated solution to produce State and federal environmental benefits. As such, under Alternative 2, the improvement of habitat conditions enabling Feather River salmonid species greater chance for survival would be eliminated, thus failing to meet this project objective.

A summary of impacts of the alternatives compared to the Proposed Project is included in **Table 1.6-1** below, pursuant to CEQA Guidelines Section 15126.6(d).

1.7 AREAS OF CONTROVERSY

1. Unused recycled water supplies
2. Regional benefits vs benefits of participating agencies (cost related)
3. Groundwater storage/storage and recovery program

Unused Recycled Water Supplies
In FY 2020/2021, an average of 56,150 AFY of recycled water supply was produced at IEUA's water recycling plants, of which, 19,534 AFY was used as recycled water direct use and 16,253 AFY was used through surface spreading for groundwater recharge. The remaining supply of 20,364 AFY was discharged as effluent to the Chino Creek and Cucamonga Creek, which eventually reaches the Santa Ana River. IEUA recycled water is used by its Regional Contract Agencies (RCAs) as direct use and they are allocated pro-rata shares of the recycled water that is recharged. Some of the RCAs do not utilize all the available recycled water supply for direct use due to a lack of potential customer uses, facilities, and funding opportunities. This unused recycled water supply makes up the plant effluent that is discharged. With the CBP, a portion of the unused recycled water supply that is currently discharged would be dedicated by participating RCAs as the source water for the advanced water purification facility (AWPF). As the interest in maximizing the use of available recycled water continues to grow, there are issues of concern as to how the remaining available supplies are put to use.

Regional and Participating Agency Benefits
The CBP offers both regional benefits and participating agency benefits through the operation of the CBP facilities. Regionally, the construction of the AWPF by 2028 reduces the risk of salinity non-compliance, which will allow for the continued use of recycled water for direct use and surface spreading recharge within the Chino Basin. As drought conditions occur, advanced treatment of recycled water will ensure permit compliance. For the participating agency benefits, the CBP facilities will create new local water supplies, diversify their water portfolio, and provide resilience during imported water supply interruptions. The investments by the participating agencies in the water supply reliability provides indirect benefits to the rest of the water agencies within the Chino Basin in developing their enhanced local supply and reducing demands on imported water during periods of shortages and/or outages. The allocation of the costs to the regional benefits that would result from CBP implementation and to participating agencies remains a topic that continues to evolve.

Groundwater Storage/Storage and Recovery Program
With the CBP facilities, groundwater storage of advanced treated recycled water will be achieved through injection wells. Storage capacity in the Chino Basin will be acquired through a Storage and Recovery Program application administered by the Watermaster. The amount of storage anticipated for the CBP is 105,000 AF. This amount of storage will exceed the current approved storage capacity of 700,000 AF and accommodates both CBP storage requirements as well as the Watermaster stakeholder storage requirements. The Storage and Recovery Application for the CBP will identify mitigation measures that would protect the Basin from Material Physical Injury (MPI), and would ensure that hydraulic control is maintained. IEUA will be required to adhere to these mitigations in order to carry out CBP operations within the Basin. Allocation of storage within the Basin remains a topic of concern, as storage and recovery programs by IEUA, as well as other Watermaster stakeholders are desired because groundwater storage has become an important resource for long term supply planning within the Basin.

1.8 SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DISCUSSED IN THIS DRAFT EIR

Table 1.5-1 provides a summary of all impacts and mitigation measures identified in the detailed environmental evaluation presented in Chapter 4 of this DPEIR. This summary is meant to provide a quick reference to the proposed CBP project's impacts, but the reader is referred to Chapter 4 to understand the assumptions, methods of impact analysis, and rationale for the findings and conclusions from which it is derived. **Table 1.6-1** provides a checklist comparison of the CBP project to the NPA, Alternative 1, and Alternative 2, but the reader is referred to Chapter 5 for an in-depth discussion of each alternative.

Table 1.5-1
SUMMARY OF IMPACTS AND AVOIDANCE, MINIMIZATION AND MITIGATION MEASURES DIISCUSSED IN THIS DRAFT EIR

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
AESTHETICS		
AES-1	Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.	Inland Empire Utilities Agency (IEUA)
AES-2	Future CBP facilities at unknown locations shall either (1) be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility; (2) be unobtrusive to scenic vistas due to height or other mitigating factors as confirmed by a visual simulation that demonstrates this; or (3) where (1) or (2) are not possible, undergo subsequent CEQA documentation to assess potential aesthetic impacts a future CBP facility may have upon contain scenic resources.	IEUA
AES-3	Should the removal of trees be required for a specific project, IEUA shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the IEUA shall replace all trees removed at a 1:1 ratio, and (2) the specific location selected for a CBP facility shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a second tier CEQA evaluation shall be completed.	IEUA
AES-4	Future proposed facilities defined within the CBP at unknown locations shall either (1) be located within sites that avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G, or (2) undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.	IEUA
AES-5	CBP facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not limited to the applicable zoning code, except where such compliance is not required by California law.	IEUA
AES-6	When CBP above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility and except where such compliance is not required by California law.	IEUA
AES-7	Future CBP projects shall implement at least the following measures, unless they conflict with the local jurisdiction's light requirements, in which case the local jurisdiction's requirements shall be enforced: • Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights. • The height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination. • Directing light and shielding shall be used to minimize off-site illumination. • No light shall be allowed to intrude into sensitive light receptor areas. • Non-reflective materials and/or coatings shall be used on the exterior of all water storage reservoirs if constructed in a publicly visible location.	IEUA

Impact Description	Impact After Mitigation
The existing visual setting of the proposed program area will be permanently altered. The intensification of development greater than that which presently occurs within the Chino Basin will change the visual setting. Given that the locations for most future Chino Basin Program (CBP) facilities are presently unknown, the impacts to visual resources in the area including scenic resources, trees, rock outcroppings, etc. and from new sources of light and glare were determined to be significant without mitigation. As such, mitigation is required to reduce impacts under this issue.	As described in Subchapter 4.2, all potential aesthetic impacts associated with the CBP can be mitigated to a less than significant impact level. Mitigation measures would: minimize impacts to scenic vistas through enforcing future projects to meet local design standards; minimize impacts to scenic resources through avoidance of such resources, or through assessment in subsequent CEQA documentation; minimize impacts to scenic resources such as trees through enforcement of compliance with local jurisdiction tree ordinance(s); minimize conflicts with regulations governing scenic quality through enforcing compliance with applicable zoning code and design requirements established by local jurisdictions; and, minimize light and glare impacts by enforcing local jurisdiction light and glare minimization standards. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to aesthetics from implementing the project as proposed.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
AGRICULTURE AND FORESTRY RESOURCES		
AGF-1	For all proposed facilities in the southern portion of the Chino Basin (south of SR 60), the California Department of Conservation: California Important Farmland Finder shall be consulted to determine whether a project would be installed within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance). If designated important farmland cannot be avoided, the IEUA shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, IEUA shall either (1) relocate and avoid the site, or alternatively IEUA shall (2) where relocation is not possible, undergo subsequent CEQA documentation to assess potential impacts that a future CBP facility may have upon agricultural resources.	--
AGF-2	For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SR 60), the potential for impacts to riparian woodland/forest land shall be determined prior to final site election. If important forest land cannot be avoided and permanently will exceed 5 acres in area, IEUA shall relocate and avoid the site, or alternatively IEUA shall conduct an evaluation to determine if it qualifies with the State definition of “forest land.” If the evaluation determines the permanent loss of important forestland will occur, IEUA shall provide compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, IEUA may carry out a forest land creation program at a 1:1 ratio for comparable woodland. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented by IEUA.	--

Impact Description	Impact After Mitigation
Due to the substantial agricultural resources located within Chino Basin, installation of future CBP related facilities were determined to have a potentially significant impact to such resources. Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant requiring mitigation outlined to minimize impacts to a level of less than significant. Furthermore, the southernmost portion of the Chino Basin overlaps with riparian woodland areas along the Santa Ana River, Chino Creek, and Mill Creek, and in the Prado Basin. Certain areas of these riparian woodlands may qualify as forest land based on the definition cited at the beginning of this subchapter. Other than these specific areas, no contiguous area of forest land occurs in the Chino Basin and no jurisdictions have designated areas within their jurisdiction with zoning designations for forest land. The Chino Basin area borders the San Bernardino National Forest, but this forest does not overlap with the Basin itself. Given that there is minimal potential for the CBP facilities to impact lands that might qualify as forest land, mitigation is required to reduce impacts to a level of less than significant.	As described in Subchapter 4.3, installation of future CBP related facilities were determined to have a potentially significant impact to forestry and agricultural resources; however, mitigation was identified to minimize agricultural and forestry resource impacts below significance thresholds including those that would: relocate or avoid impacts to important agricultural land; and relocate or avoid impacts to forest land or offset the loss by purchasing compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank. As described in Subchapter 4.3, no unavoidable significant impact to agricultural or forestry resources will result from implementing the proposed project.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
AIR QUALITY AQ-1 IEUA shall require its contractor(s) to use off-road equipment that meets the U.S. EPA certified Tier 4 Final engines or engines that are certified to meet or exceed the emission ratings for U.S. EPA Tier 4 Final or Interim engines such that average daily nitrogen oxide (NO_X) emissions are verified to be below the SCAQMD regional significance threshold of 100 pounds per day.	IEUA

Impact Description	Impact After Mitigation
The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that construction of the proposed CBP would result in an exceedance of thresholds for a criteria pollutant: NO_x. Maximum daily NO_X emissions would exceed the SCAQMD regional significance threshold throughout the entire duration of project construction. Operational electricity consumption would not result in direct project emissions of criteria air pollutants. Only direct emissions of criteria pollutants from energy sources that combust on-site, such as natural gas, are attributed to individual projects. None of the individual projects implemented under the proposed CBP would result in the combustion of natural gas on-site. Criteria pollutant emissions from the power plants that would provide electricity to CBP facilities are associated with the power plants themselves, which are stationary sources permitted by air districts and/or the U.S. EPA, and are subject to local, state	As described in Subchapter 4.4, with the implementation of mitigation, construction of the proposed project would reduce impacts for all criteria pollutants below South Coast Air Quality Management District (SCAQMD) significance thresholds. Mitigation measures would: require IEUA's contractor(s) to use off-road equipment that meets the U.S. EPA certified Tier 4 Final engines, or engines that are certified to meet or exceed the emission ratings for U.S. EPA Tier 4 Final or Interim engines, such that average daily nitrogen oxide (NOX) emissions are verified to be below the SCAQMD regional significance threshold of 100 pounds per day. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to air quality from implementing the project as proposed.

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
and federal control measures. Thus, emissions of criteria pollutants related to electricity consumption are not attributable to individual projects. Furthermore, the CBP would be consistent with the SCAQMD 2016 Air Quality Management Plan (AQMP), and as such would not result in or cause National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) violations. Construction- and operation-source emissions would not exceed the applicable SCAQMD Localized Significance Thresholds and would be less than significant. Mitigation is required to reduce the project's contribution to significant air quality emissions.	

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
BIOLOGICAL RESOURCES	
BIO-1 All future CBP Infrastructure projects shall be required to consult with a qualified professional to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a qualified professional, in any case in which a future CBP Infrastructure project will affect undeveloped land, or in which IEUA seeks State Funding, site surveys shall be conducted in accordance with appropriate standards by a qualified biologist/ecologist, except where such surveys have already been conducted (i.e. at RP-4). If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken: a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species. b. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. IEUA shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished. c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted in areas that were not previously surveyed because of access or timing issues or project design changes; pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. If special-status plants or plant communities are identified, the following hierarchy of actions shall be taken: a) find an alternative site; b) avoid the plants and maintain them onsite after completing the project; or c) provide compensatory mitigation offsite.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-2	Biological Resources Management Plan (BRMP): During final design and prior to issuance of construction permits, a BRMP will be prepared to assemble the biological resources mitigation measures for each specific infrastructure improvement in the future. The BRMP will include terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility. The BRMP will also discuss habitat replacement and revegetation, protection during ground-disturbing activities, performance (growth) standards, maintenance criteria, and monitoring requirements for temporary and permanent native plant community impacts. The parameters of the BRMP will be formed with the mitigation measures from subsequent CEQA documentation, including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.	IEUA
BIO-3	Prior to discharge of fill or streambed alteration of state or federal water jurisdictional areas, IEUA shall obtain regulatory permits from the U.S. Army Corps of Engineers, local Regional Water Quality Control Board and the California Department of Fish and Wildlife as required. Any future project that must discharge fill into a channel or otherwise alter a streambed shall be minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensatory habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A Habitat Mitigation and Monitoring Proposal shall be prepared and reviewed and approved by the appropriate regulatory agencies. IEUA will also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.	IEUA
BIO-4	Jurisdictional Water Preconstruction Surveys: A federal and state jurisdictional water preconstruction survey will be conducted at least three months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-5	To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season (nesting season is approximately from February 15 through September 1 of a given calendar year). Alternatively, a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction can be conducted by a qualified biologist no more than 14 days prior to initiation of ground disturbance; construction may only commence once a qualified biologist has demonstrated that no nesting birds are present at a given site. IEUA shall coordinate with the CDFW to identify the appropriate nesting bird survey protocol. The results of the nesting bird survey will be documented in a report submitted by the avian biologist to IEUA. IEUA, in coordination with CDFW and USFWS (as appropriate), may designate nest buffers outside of which construction activities may be allowed to proceed.	IEUA
BIO-6	All future CBP Infrastructure projects shall be required to consult with a qualified professional to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed in coordination with CDFW and submitted to IEUA that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.	IEUA
BIO-7	Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP.	IEUA
BIO-8	During the design phase of future CBP Infrastructure projects, IEUA shall place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat area, and protect the integrity of habitat linkages. As part of this emphasis, IEUA shall facilitate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific facilities improvement.	IEUA
BIO-9	Require facility designs and maintenance activities to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions. A qualified biologist shall be retained to determine the scope of the following for a given project site: a. Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources. b. Within riparian areas and wetlands subject to state or federal regulations, riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, faunal resting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in a measurable reduction in the reproductive capacity of sensitive biotic resources. c. Within habitats of plants listed by the CNDDB or CNPS as "special" or "of concern," require that new facilities do not result in a reduction in the number of these plants, if they are present.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-10	Maximize the preservation of individual oak, sycamore and walnut trees within proposed CBP Infrastructure sites. Preservation is defined within this measure as follows: existing oak, sycamore and walnut trees within a given Project site shall be retained within the site to the maximum extent feasible except where their preservation would interfere with functional and reasonable project design. Where the preservation of individual trees is not possible, IEUA shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) IEUA shall replace all trees removed at a 1:1 ratio, and (2) the specific location selected for a well shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a second tier CEQA evaluation shall be completed.	IEUA
BIO- 11	Require the establishment of buffer zones adjacent to areas of biological resources as recommended and defined by the site biologist. Such buffer zones shall be of adequate width to protect biological resources from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identified resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer area are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource.	IEUA
BIO-12	As part of completion of the final site development, after ground disturbance has occurred within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management at the specific site, which shall be implemented in cooperation with regulatory agencies and with oversight from a qualified biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.	IEUA
BIO-13	Clean Construction Equipment. During construction, equipment will be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials will be removed from construction equipment when working in native plant communities, near special-status plant communities, or in areas where special-status plant species have been identified.	IEUA
BIO-14	Contractor Education and Environmental Training. Personnel who work onsite will attend a Contractor Education and Environmental Training session conducted by a qualified biologist. The environmental training will cover general and specific biological information on the special-status plant species that may be present near the construction site, including the distribution of the resources, the recovery efforts, the legal status of the resources, and the penalties for violation of project permits and laws. The Contractor Education and Environmental Training sessions will be given before the initiation of construction activities and repeated, as needed, when new personnel begin work within the project limits. Daily updates and synopsis of the training will be performed during the daily safety ("tailgate") meeting. All personnel who attend the training will be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training, and such tracking sheets shall be maintained for inspection by IEUA.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-15	Biological Monitor to Be Present during Construction Activities in areas where impacts to Riparian, Riverine, Wetland, Endangered Species or Endangered Species critical habitat occurs. A biological monitor (or monitors) will be present onsite during construction activities that could result in direct or indirect impacts on sensitive biological resources (including listed species) and to oversee permit compliance and monitoring efforts for all special-status resources. A biological monitor (qualified biologist) is any person who has a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field and/or has demonstrated field experience in and knowledge about the identification and life history of the special-status species or jurisdictional waters that could be affected by project activities. The biological monitor(s) will be responsible for monitoring the construction contractor to ensure compliance with the Section 404 Individual Permit, Section 401 Water Quality Certification and the Lake and Streambed Alteration Agreement. Activities to ensure compliance would include performing construction-monitoring activities, including monitoring environmental fencing, identifying areas where special-status plant species are or may be present, and advising the Contractor of methods that may minimize or avoid impacts on these resources. Biological monitor(s) will be required to be present in all areas during ground disturbance activities and for all construction activities conducted within or adjacent to identified Environmentally Sensitive Areas, Wildlife Exclusion Fencing, and Non-Disturbance Zones as defined by the project biologist.	IEUA
BIO-16	Food and Trash: All food-related trash items (e.g., wrappers, cans, bottles, food scraps) will be disposed of in closed containers and removed at least once a week from the construction site.	IEUA
BIO-17	Rodenticides and Herbicides: Use of rodenticides and herbicides in the project footprint will be restricted at the direction of the project biologist. This measure is necessary to prevent poisoning of special-status species and the potential reduction or depletion of the prey populations of special–status wildlife species. Where pesticides must be used, they must be used in full accordance with use instructions for the particular chemical and at the direction of the project biologist.	IEUA
BIO-18	Wildlife Exclusion Fencing: Exclusion barriers (e.g., silt fences) will be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas as defined by the project biologist prior to the commencement of construction activities to restrict special-status species from entering the construction area during construction. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW, as appropriate. Clearance surveys will be conducted for special-status species after the exclusion fence is installed in compliance with USFWS and/or CDFW requirements. The project biologist shall determine the frequency in which clearance surveys will be conducted to determine the efficacy of the exclusion fencing.	IEUA
BIO-19	Equipment Staging Areas: Prior to the commencement of construction, the Project Proponent shall identify staging areas for construction equipment to be utilized during construction that will be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors.	IEUA
BIO-20	Plastic mono-filament netting (erosion-control matting) or similar material will not be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds will be used as substitutes.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-21	Vehicle Traffic: During ground-disturbing activities, project-related vehicle traffic will be restricted within the construction area to established roads, construction areas, and other designated areas to prevent avoidable impacts. Access routes will be clearly flagged, to ensure traffic outside of the designated areas will be prohibited.	IEUA
BIO-22	Entrapment Prevention: All excavated, steep-sided holes or trenches more than 8 inches deep will be covered at the close of each working day with plywood or similar materials, or a minimum of one escape ramp constructed of earth fill for every 10 feet of trenching will be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. All culverts or similar enclosed structures with a diameter of 4 inches or greater will be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material will be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.	IEUA
BIO-23	Weed Control Plan: Prior to the commencement of construction, a Weed Control Plan will be developed for IEUA by the project biologist to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics will be addressed: • A schedule for noxious weed surveys shall be addressed. • Weed control treatments shall be addressed and ultimately implemented by IEUA, including permitted herbicides, and manual and mechanical methods for application; herbicide application will be restricted in Environmentally Sensitive Areas (as defined by the project biologist). • The timing of the weed control treatment for each plant species shall be addressed. • Fire prevention measures shall be addressed. IEUA shall maintain records demonstrating implementation of the Weed Control Plan, and shall make those records available to inspection by regulatory agency upon request.	IEUA
BIO-24	Dewatering/Water Diversion Plan: If construction is planned to occur where there is open or flowing water, prior to the commencement of construction IEUA shall submit the Dewatering Plan prepared in coordination with the resource agencies (e.g., USACE, SWRCB/RWQCB, and CDFW, as appropriate). The Dewatering Plan shall identify how open or flowing water will be routed around construction areas, such as through the creation of cofferdams. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures shall be implemented to avoid and lessen impacts on jurisdictional waters during construction: • The cofferdams, filter fabric, and corrugated steel pipe are to be removed from the creek bed after completion of the project. • The timing of work within all channelized waters is to be coordinated with the regulatory agencies. • The cofferdam is to be placed upstream of the work area to direct base flows through an appropriately sized diversion pipe. The diversion pipe will extend through the Contractor's work area, where possible, and outlet through a sandbag dam at the downstream end. • Sediment-catch basins immediately below the construction site are to be constructed when performing in-channel construction to prevent silt- and sediment-laden water from entering the main stream flow. Accumulated sediments shall be periodically removed from the catch basins.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
BIO-25	Permanent Water Diversion Projects: IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program. IEUA shall conduct a second-tier CEQA evaluation for a proposed water diversion project associated with the CBP. The potential impacts to Prado Basin and sensitive habitat (for example riparian, wetland, or critical habitat) from implementation of such diversion projects shall receive public review, including pertinent wildlife management agencies and interested parties.	IEUA
BIO-26	Landscaping at Future CBP Infrastructure Sites: IEUA shall require that any landscaping at future CBP Infrastructure sites shall be landscaped with water-wise or xeric landscape plants (native plants where feasible) to minimize future water demand.	IEUA

Impact Description	Impact After Mitigation
Development of the CBP, because the specific locations for future CBP projects are not presently known, there is a potential that a future CBP facility may be developed in an area containing significant biological resources that cannot be avoided. Future CBP facilities may be installed within sites that contain significant biological resources that may be impacted without mitigation. These impacts may include direct impacts such as the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equip-ment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas. In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Furthermore, the CBP operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub.	As described in Subchapter 4.5, because the specific locations for future CBP projects are not presently known, there is a potential that a future CBP facility may be developed in an area containing significant biological resources that cannot be avoided. Substantial mitigation is provided to minimize impacts such that, a future CBP facility would not be developed in an area containing significant biological resources that cannot be avoided. However, it has been determined that even with the implementation of substantial mitigation measures to avoid contributing to cumulatively considerable impacts to covered species and supporting habitat, which can be mitigated by implementing the HCP, impacts to one species cannot be completely avoided. The proposed CBP project operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordnances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. Thus, the proposed project is forecast to cause significant unavoidable adverse impact to biological resources, specifically implementation of the CBP will contribute cumulatively to potential significant impacts to the Santa Ana Sucker due to the reduction in cumulative flows to the Santa Ana River.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
CULTURAL RESOURCES CUL-1 Where a future discretionary project requiring additional CEQA review is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the CBP project will not be required to complete a follow on cultural resources report (Phase I Cultural Resources Investigation) unless IEUA is seeking additional State or federal funding, in which case IEUA shall prepare a Phase I Cultural Resources Investigation to satisfy State CEQA-plus or federal agency requirements. Where a Phase I Cultural Resources Investigation is not required or has already been completed (such as at RP-4), the following shall be required to minimize impacts to any accidentally exposed cultural resource materials: • Should any subsurface cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist meeting the Secretary of Interior Standards for Archaeology. Responsibility for making this determination shall be with IEUA's trained onsite inspector. An archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures in accordance with the State CEQA Guidelines.	IEUA
CUL-2 Where a future discretionary project requiring additional CEQA review is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, and/or IEUA is seeking State or federal funding, IEUA shall complete a follow-on cultural resources report (Phase I Cultural Resources Investigation) regardless of whether IEUA is seeking State or federal funding. Where a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given CBP Infrastructure facility: 1. Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project site shall include the following research procedures, as appropriate: • Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet; • Historical background research, geoarchaeological profile analysis, and paleontological literature review; • Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area in accordance with AB52, pertinent local government agencies, and local historic preservation groups; • Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions; • Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases. 2. Phase II (Evaluation): If cultural resources are encountered in a project site and cannot be avoided, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
	• Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals; • In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation; • Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples; • Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted. 3. Phase III (Mitigation/Data Recovery): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. The first option is avoidance by selecting and implementing a CBP Infrastructure facility at an alternative site without significant cultural or paleontological resources. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project: • Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation; • Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public; • Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question. 4. Phase IV (Monitoring): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate, as put forth in mitigation measures TCR-1 through TCR-3.	
CUL-3	After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared and submitted to South Central Coastal Information Center (SCCIC), Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM), as appropriate and in addition to IEUA for the project, for permanent documentation and easy references by future researchers.	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
CUL-4	Prior to commencement of construction of CBP Infrastructure facilities (excluding those facilities that have undergone site specific Cultural Resources Investigations, such as at RP-4), IEUA shall confer with the CBP project stakeholders to establish a programmatic agreement with SHPO that will stipulate a set of mutually accepted guidelines that address research procedures and the types of potential cultural resources that may be excluded from further consideration before CBP Infrastructure facilities are implemented, such as common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Once this agreement has been made with SHPO, IEUA shall retain the agreement in the Project file, and shall ensure that any CBP partner agencies are given copies of the agreement for reference on future CBP Infrastructure facilities. For CBP projects that are in development prior to an agreement with SHPO, all types of cultural resources shall be considered by the professionals assessing historical resources within the project footprint; regardless, the steps provided in mitigation measure CUL-2 shall be followed to assess and minimize impacts to sensitive cultural resources within a given site.	IEUA

Impact Description	Impact After Mitigation
As described in Subchapter 4.6, the Chino Basin is a large expanse of area that may contain historical, archaeological, or paleontological resources. As such, future CBP projects may be developed within sites that contain such resources. Since the proposed project is at the programmatic level, specific locations for many of the proposed CBP projects have not yet been determined. As such, substantive mitigation has been identified to minimize potentially significant impacts to cultural resources.	As described in Subchapter 4.6, mitigation measures required to reduce cultural resource impacts would: exclude highly disturbed sites from requiring further cultural resource evaluation except to adhere to procedures pertaining to the treatment of accidental discoveries, unless IEUA is seeking State funding for the project; ensure that future CBP projects that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or IEUA is seeking State funding, will require a follow on Phase I Cultural Resources Investigation and enforce several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located; ensure that a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM for projects containing cultural resources; and, set a precedent for future CBP projects that would streamline the design and completion of future Phase I Cultural Resources Investigations. As described in Subchapter 4.6, no unavoidable significant impact to cultural resources will result from implementing the proposed Project.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
ENERGY No Mitigation Required.		--
Impact Description	**Impact After Mitigation**	
As discussed in Subchapter 4.7, CBP construction and operation would not result in inefficient, wasteful or unnecessary consumption of energy and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This is because the CBP would result in an overall net reduction in electricity consumption associated with local water supplies over the 25-year term of the proposed water transfer agreement. Impacts would be less than significant without the need for added mitigation. The CBP would replace imported SWP water, which is energy-intensive, with a local, recycled water source in call years. Furthermore, IEUA would procure energy to serve CBP facilities from SCE, which has historically achieved the State's Renewables Portfolio Standard (RPS) program and anticipates meeting the RPS of 60 percent renewable energy by 2030. IEUA would also explore options for using additional on-site renewable energy, and therefore the CBP would not obstruct the 2017 Scoping Plan. Impacts would be less than significant. Additionally, the CBP would support the IEUA Climate Change Action Plan (CCAP) objective to strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources. With compliance with current federal and State regulations pertaining to energy conservation, the proposed CBP is anticipated to have a less than significant impact on energy demand and resources.	No mitigation is required. Impacts are less than significant.	

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
GEOLOGY AND SOILS		
GEO-1	Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site-specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible a second tier CEQA evaluation shall be completed.	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
GEO-2	For each well development or other CBP project that is less than one acre in size requiring ground disturbing activities such as grading, IEUA shall identify and implement best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.	IEUA
GEO-3	For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources. Treatment of any discovered paleontological resources shall follow the phasing and corresponding actions identified under MM CUL-2.	IEUA

Impact Description	Impact After Mitigation
The Chino Basin contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future CBP related facilities in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the CBP was identified.	Significant geology and soils impacts can be reduced through the implementation of mitigation. Several mitigation measures were identified to minimize geology and soils impacts including those that would: ensure new facilities are located outside of delineated fault zones through relocation, implementation of seismic design measures, or subsequent CEQA documentation; reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation; ensure that the proposed facilities associated with the CBP that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs; minimize impacts to paleontological resources through requiring site-specific studies, where necessary. As described in Subchapter 4.8, no unavoidable significant impact to geology and soils will result from implementing the proposed project.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
GREENHOUSE GASES GHG-1 IEUA shall implement all feasible GHG reduction measures during construction. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures: • Use alternative fuels for construction equipment • Use electric and hybrid construction equipment • Limit construction equipment idling beyond regulation requirements • Institute a heavy-duty off-road vehicle plan • Implement a construction vehicle inventory tracking system	IEUA
GHG-2 IEUA shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures: • Exceed Title 24 Building energy efficiency standards • Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems • Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle	IEUA

Impact Description	Impact After Mitigation
As described in Subchapter 4.9, implementation of the proposed CBP is projected to result in a net decrease of approximately 15,753 MT of CO_2e in call years, while under a non-call year scenario the CBP would emit an estimated 6,435 MT of CO_2e. In total, operation of the CBP would result in a net reduction in greenhouse gas (GHG) emissions of approximately 5,535 MT of CO_2e (including the reduction from offsetting SWP imports) over the 25-year term of the proposed water transfer agreements. As a result of the uncertainty surrounding the future power mix and energy demands of the proposed CBP, the CBP would potentially fail to procure its electricity from carbon-neutral electricity sources by 2045. Therefore, the long-term, indirect impacts of the CBP's operational GHG emissions would be potentially significant in both call and non-call years.	Implementation of mitigation that would ensure that IEUA implement all feasible GHG reduction measures during operations is required, but does not reduce operations-related emissions below significance thresholds. Additionally, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. As such, while mitigation ensuring IEUA implements all feasible GHG reduction measures during operations would minimize impacts to the greatest extent feasible, construction-related impacts from implementation of the proposed CBP would be potentially significant. Thus, exceedances of applicable SCAQMD regional thresholds are considered significant and unavoidable, and the construction and operation of the proposed project could create a significant cumulative impact to global climate change.

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
HAZARDS AND HAZARDOUS MATERIALS		
HAZ-1	For CBP facilities that handle hazardous materials or generate hazardous waste, the Hazardous Materials Business Plan prepared and submitted to the Certified Unified Program Agency shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for Hazardous Materials Business Plans. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The Hazardous Materials Business Plan shall be approved prior to operation of the given facility.	IEUA
HAZ-2	The Hazardous Materials Business Plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials	IEUA
HAZ-3	Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.	IEUA
HAZ-4	All hazardous materials during both operation and construction of CBP Facilities shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and federal law.	IEUA
HAZ-5	Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and federal law.	IEUA
HAZ-6	All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the CBP. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.	IEUA
HAZ-7	Prior to final site selection for future CBP facilities, IEUA shall obtain a Phase I Environmental Site Assessment (ESA) for the selected site. If a site contains contamination, the agency shall either avoid the site by selecting an alternative location or shall remove any contamination at the site (remediate) to a level of concentration that eliminates hazard to employees working at the site and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law.	IEUA
HAZ-8	Should an unknown contaminated site be encountered during construction of CBP facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local Certified Unified Program Agency or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
	of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the Certified Unified Program Agency or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.	
HAZ-9	Prior to finalizing site selection of a CBP facility within an airport safety zone, input from the affected airport management entity shall be solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use compatibility plan. If a potential conflict with an airport land use compatibility plan is identified, IEUA shall relocate the facility outside the area of conflict, or if the site is deemed essential, IEUA shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.	IEUA

Impact Description	Impact After Mitigation
The Chino Basin contains substantial hazards and hazardous materials issue constraints. Due to these substantial constraints and the installation of future CBP infrastructure facilities in locations where such constraints may exist, a potential for significant hazards and hazardous materials issue impacts from implementation of the CBP were identified in Subchapter 4.10.	The hazards and hazardous materials evaluation in the DPEIR concluded that the identified hazards on the project site can be adequately mitigated to a level of impact that is less significant. Several mitigation measures were identified to minimize hazards and hazardous materials impacts including those that would: ensure that applicable CBP facilities Business Plans incorporate best management practices designed to minimize the potential for accidental release of such chemicals; ensure that applicable CBP facilities Business Plans identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material; ensure sensitive receptors will not be exposed to significant health threat by modeling the pathways of release and implementing specific measures that would minimize potential exposure to acutely hazardous materials; ensure hazardous materials are disposed of and delivered to licensed facilities; ensure the establishment of and adherence to specific thresholds of acceptable clean-up of hazardous materials; ensure the preparation of and adherence to vector management plans; ensure remediation of an accidental spill or discharge of hazardous material in compliance with State and local regulations; ensure that sites for future CBP facilities obtain a Phase I Environmental Site Assessment and either avoid or remediate a site that is contaminated; ensure that any unknown contamination is remediated and handled according to the local CUPA; ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area; ensure that construction traffic is managed safely; and, ensure that fire hazard reduction measures are enforced. Therefore, though there will be some adverse impacts as a result of implementing the project, specific mitigation measures have been identified to reduce potential project specific and cumulative (direct and indirect) impacts to a less than significant level for hazards and hazardous material issues. Thus, the project is not forecast to cause any unavoidable significant adverse hazards or hazardous material impacts.

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
HYDROLOGY AND WATER QUALITY		
HYD-1	Watermaster shall review the IEUA's Storage and Recovery Program application for the CBP and estimate the surface and ground water systems' response (estimate the potential for new pumping sustainability challenges). Watermaster shall then prepare a report that describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the CBP. The IEUA shall develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into its Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the CBP storage agreement.	IEUA
HYD-2	To mitigate MPI caused by the IEUA's proposed Storage and Recovery Program application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or TAKE cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.	IEUA
HYD-3	Watermaster shall review the IEUA's Storage and Recovery Program application for the CBP and estimate the surface and ground water systems' response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed CBP. The IEUA shall develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into its Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the CBP storage agreement.	IEUA
HYD-4	To mitigate the potential for new land subsidence caused by the IEUA's proposed Storage and Recovery Program application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or TAKE cycles to ensure the CBP does not contribute to the lowering of groundwater-levels below the new land subsidence metric, (2) providing an alternate supply to MZ-1 producers to maintain groundwater-levels above the new land subsidence metric, to the extent that the CBP affects them, (3) a combination of (1) and (2) above, and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.	IEUA
HYD-5	Watermaster shall estimate the reduction in net recharge and Safe Yield for the CBP and deduct it from water stored in the CBP storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the CBP. The IEUA shall develop mitigation measures pursuant to the requirements suggested in MM HYD-6 and established by Watermaster; these measures shall be incorporated into the IEUA's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the CBP storage agreement.	IEUA
HYD-6	To mitigate reduction in net recharge and Safe Yield caused by the CBP (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or TAKE cycles to minimize	IEUA

	Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
	reductions in net recharge, (2) deducting the reduction in net recharge from the IEUA's Storage and Recovery account, (3) recharge additional water to mitigate reductions in net recharge, (4) construct facilities in the southern part of the Basin to eliminate the reduction of net recharge due the CBP, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.	
HYD-7	Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected Basin conditions assumed in the evaluation of the CBP Storage and Recovery Program application process, compare the projected CBP operations to actual operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the CBP storage agreement. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the CBP storage agreement that will adequately mitigate MPI and related adverse impacts including but not limited to pumping sustainability, net recharge and safe yield, subsidence, hydraulic control, and groundwater quality.	IEUA
HYD-8	Prior to the commencement of construction of any CBP project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), IEUA shall require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each CBP facility, and to control urban runoff after each CBP facility is constructed and is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to: • The use of silt fences or coir rolls; • The use of temporary stormwater desilting or retention basins; • The use of water bars to reduce the velocity of stormwater runoff; • The use of wheel washers on construction equipment leaving the site; • The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads; • The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and • Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.	IEUA
HYD-9	Prior to commencement of construction of project facilities, IEUA shall be required to either: (1) Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever feasible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not feasible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall: (2) Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and	IEUA

Environmental Category / Avoidance, Minimization and Mitigation Measures		Responsible Agency
	implement retention basins, best management practices, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.	
HYD-10	To minimize potential ground disturbances associated with installation and maintenance of wellhead treatment at existing wells, the equipment and treatment facilities shall be installed within or along existing disturbed easements or rights-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements, whenever feasible.	IEUA
HYD-11	For long-term mitigation of site disturbances at CBP facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or man-made landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two-year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows.	IEUA
HYD-12	All new and expanded water treatment facilities associated with the CBP shall ensure that any brine generated from the water treatment process that cannot be otherwise treated on-site is disposed of in accordance with state and local regulations—such as through disposal to a brine line (Non-Reclaimable Wastewater System, Etiwanda Wastewater Line, and Inland Empire Brine Line, etc.)—to prevent brine from being discharged into the local stormwater collection system.	IEUA
HYD-13	IEUA shall verify that any given CBP facility (excepting those located at existing facilities [wells, water treatment plants, etc.] and pipelines and turnouts located belowground) is located outside of the 100-year floodplain by utilizing the FEMA FIRM panels for the selected area prior to project implementation. If a given project is located outside of the 100-year floodplain, then no subsequent CEQA documentation specific to floodplains are required. However, if a project is located within the 100-year floodplain either (1) a new location outside of the 100-year floodplain shall be selected, or (2) a second tier CEQA evaluation shall be completed that would address the given project's location within the 100-year floodplain.	IEUA

Impact Description	Impact After Mitigation
As described in Subchapter 4.11, the overall hydrology (watershed, drainage and flood hazards) and water quality impacts that would result from implementation of the CBP could be significant without the implementation of substantive mitigation measures. As such, several mitigation measures were identified to minimize impacts related to hydrology and water quality.	With implementation of the required mitigation, the hydrology and water quality analysis in the DEIR concluded that the project can be development without causing significant adverse effects on hydrology and water quality resource issues. Several mitigation measures were identified to minimize impacts related to hydrology and water quality, such as those that would: ensure that the Watermaster reviews IEUA's storage and recovery program application and gathers the appropriate data to (1) determine whether future CBP projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, and/or result in new subsidence, and (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a project; address the plan of response by the Watermaster should Chino Basin conditions vary from the projections that have been modeled as part of the CBP (and all supporting documentation); require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the Construction General Permit and Stormwater Pollution Prevention Plan, which are required for larger projects; ensure that drainage is managed through

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
either runoff collection or development of a drainage plan for a given CBP project; require CBP projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites; require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future CBP facility sites; and, ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. Therefore, though there will be some adverse impacts as a result of implementing the project, specific mitigation measures have been identified to reduce potential project specific and cumulative (direct and indirect) effects to a less than significant impact level for hydrology and water quality issues. Thus, the project is not forecast to cause any unavoidable significant adverse hydrology and water quality impacts.	

Environmental Category / Avoidance, Minimization and Mitigation Measures	Responsible Agency
LAND USE / PLANNING LU-1 Following selection of sites for future CBP-related facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific project design features or mitigation measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.	--

Impact Description	Impact After Mitigation
As described in Subchapter 4.12, the project does not propose any action that could physically divide an established community. The CBP would not conflict with the goals and policies of the applicable General Plans. In addition, IEUA would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. However, a potential conflict could result from future CBP facilities being developed in locations that are incompatible (as a result of lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses. As such, mitigation is required to reduce potentially significant land use and planning impacts.	As described in Subchapter 4.12, impacts related to land use and planning are minimal; however, mitigation is provided to address the potential for conflicts with land use from CBP related facilities. This mitigation would ensure that the facilities associated with the CBP are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. With implementation of this mitigation measure, the project-related land use and planning impacts can be reduced below a level of significance, and as such, the proposed project will not cause unavoidable significant land use and planning impacts.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
MINERAL RESOURCES MR-1 IEUA shall locate each facility proposed under the CBP outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, subsequent CEQA documentation shall be prepared to identify specific measures to mitigate the loss of mineral resources.	--

Impact Description	Impact After Mitigation
As described in Subchapter 4.13, limited mineral resources occur in the northern portion of the Chino Basin. As such, there is a nominal potential for future CBP facilities to be installed within a mineral resource zone. Given that the locations for future CBP facilities are not presently known, the development of future CBP facilities could result in a significant impacts to mineral resources.	As described in Subchapter 4.13, limited mineral resources occur in the northern portion of the Chino Basin. As such, there is a nominal potential for future CBP facilities to be installed within a mineral resource zone. However, mitigation has been identified to minimize mineral resource impacts that would ensure that the proposed facilities associated with the CBP would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources. With implementation of mitigation, project-related mineral resource impacts can be reduced below a level of significance, and as such, the proposed project will not cause unavoidable significant mineral resource impacts.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
NOISE NOI-1 The following construction noise control practices shall be implemented at all CBP construction sites: • Construction staging and activities shall be located in areas as far as practicable from sensitive receivers or in areas where receivers can be shielded from construction noise. • Whenever practicable, construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously. • All heavy-duty stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receivers. • IEUA shall provide a non-automated telephone number for local residents to call to submit complaints associated with construction noise during all phases of construction. IEUA shall maintain a log of complaints and shall address complaints to minimize noise issues for neighbors.	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
NOI-2	Project-level construction noise studies shall be conducted for the following project activities that would exceed the screening criteria for a less than significant impact: • All projects under Project Category 1, if the center of the construction site would be located within 225 feet of residential land uses and/or within 50 feet of commercial land uses • All projects under Project Category 2, if the center of the construction site would be located within 100 feet of residential and/or commercial land uses • Wellhead treatment projects under Project Category 4, if the center of the construction site would be located within 100 feet of residential land uses and/or within 50 feet of commercial land uses Such noise studies shall identify the existing ambient noise levels, characterize the nearest sensitive receivers, estimate the noise levels receivers will experience during construction of individual projects, compare estimated noise levels to the daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual, outline measures that may be used to reduce noise levels, and determine the amount of noise reduction that would occur with implementation of these measures. If the individual project would be constructed concurrently with development projects located within a 0.5-mile radius of the individual project location, the noise study shall also consider the cumulative impact of construction noise on sensitive receivers. If the project-level noise study concludes that noise reduction measures are required, Mitigation Measure NOI-3 shall be implemented.	IEUA
NOI-3	If the results of the project-level construction noise study prepared under Mitigation Measure NOI-2 determine noise reduction measures are required, noise reduction measures shall be implemented to reduce noise levels to at or below the daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual. Construction noise reduction measures may include, but would not be limited to, the use of mufflers, sound blankets/barriers, and/or enclosures; scheduling construction activities to minimize simultaneous operation of noise-producing equipment; and/or temporary accommodations for affected residents. If applicable, construction noise reduction measures shall be implemented to reduce cumulative noise levels to local jurisdiction or FTA (2018) construction noise criteria. If project-level construction noise cannot be reduced to at or below the local jurisdiction acceptable noise levels or daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual, IEUA shall seek a variance from the local noise ordinance prior to initiating construction.	IEUA
NOI-4	Prior to the commencement of construction activities for individual projects with noise-generating components (i.e., extraction wells, pump stations, and wellhead treatment facilities) where sensitive receivers are located within 1,000 feet of the individual project sites, project-level operational noise studies shall be conducted. Such noise studies shall identify the ambient noise levels, characterize the nearest sensitive receivers, estimate the noise levels receivers will experience during operation of individual projects during the operational period, and compare estimated noise levels to the noise level standards of the applicable jurisdiction. If one or more other individual CBP projects with noise-generating components are proposed to be located within 1,000 feet of the individual project under evaluation, the operational noise study shall also evaluate the combined operational noise levels generated by all CBP projects within 1,000 feet of the individual project site. The operational noise study shall also outline measures that shall be implemented to reduce noise levels below the local jurisdiction's noise standards and demonstrate how implementation of these noise reduction measures would reduce noise levels below the applicable standards. Noise reduction measures may include, but would not be limited to, alternative site design, alternative orientation of noise sources, alternative equipment selection, use of sound enclosures, and construction of berms and/or barriers. Noise reduction	IEUA

<table>
<tr><th colspan="2">Environmental Category /Avoidance, Minimization and Mitigation Measures</th><th>Responsible Agency</th></tr>
<tr><td></td><td>measures shall be implemented to reduce noise levels to the noise level standards of the applicable jurisdiction. If project-level operational noise cannot be reduced to at or below the local jurisdiction acceptable noise levels, IEUA shall either (1) select an alternative site location that avoids exceeding the noise level standards of the applicable jurisdiction at the nearest sensitive receptor, or (2) undergo subsequent CEQA documentation to assess potential site-specific noise impacts from locating a future facility in close proximity to sensitive receptors.</td><td></td></tr>
<tr><td>NOI-5</td><td>Whenever practicable, vibration-generating equipment including bull dozers, loaded trucks, drill rigs, vibratory rollers, and jackhammers shall operate outside the minimum distances specified in Table 4.14-25 of the draft PEIR for historic sites, other structures, and vibration-sensitive receivers during CBP construction activities. Furthermore, whenever practicable, vibration-generating equipment including bull dozers, loaded trucks, drill rigs, vibratory rollers, and jackhammers shall not be operated concurrently with vibration-generating equipment associated with cumulative development projects located within 600 feet of CBP construction sites.

(copied here to accompany this measure)

Table 4.14-25
VIBRATION LEVEL CONTOURS DURING CONSTRUCTION ACTIVITIES

<table>
<tr><th rowspan="2">Equipment</th><th colspan="4">Minimum Distance to Receiving Land Use for a Less Than Significant Impact (feet)</th></tr>
<tr><th>Historic Sites</th><th>All Other Structures</th><th>Daytime Vibration-Sensitive Land Uses</th><th>Nighttime Vibration-Sensitive Land Uses</th></tr>
<tr><td>Large Bull Dozer</td><td>20</td><td>15</td><td>10</td><td>55</td></tr>
<tr><td>Small Bull Dozer</td><td>5</td><td>5</td><td>5</td><td>5</td></tr>
<tr><td>Loaded Truck</td><td>20</td><td>10</td><td>10</td><td>35</td></tr>
<tr><td>Drill Rig5</td><td>20</td><td>15</td><td>15</td><td>55</td></tr>
<tr><td>Vibratory Roller</td><td>40</td><td>30</td><td>25</td><td>110</td></tr>
<tr><td>Jackhammer</td><td>10</td><td>5</td><td>5</td><td>25</td></tr>
</table>
</td><td>IEUA</td></tr>
<tr><td>NOI-6</td><td>Whenever practicable at CBP construction sites within 120 feet of historic sites, other structures, and vibration-sensitive receivers during CBP construction activities, non-vibratory rollers and small bull dozers shall be utilized instead of vibratory rollers and large bull dozers.</td><td>IEUA</td></tr>
</table>

	Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
NOI-7	If operation of construction equipment outside the specified buffer distances in Table 4.14-25 of the draft PEIR (copied and provided under NOI-5) is not practicable, a detailed study of vibration impacts shall be conducted prior to the commencement of construction for that project. Such vibration studies shall characterize the nearest historic sites, structures, and/or sensitive receivers; estimate the vibration levels receivers will experience during construction of individual projects; compare estimated vibration levels to applicable FTA (2018) Transit Noise and Vibration Impact Assessment Manual and Caltrans (2020) Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01); standards for vibration impacts related to structural damage and human annoyance; outline any measures that may be used to reduce vibration levels; and determine the amount of vibration reduction that would occur with implementation of these measures. Vibration reduction measures may include, but would not be limited to, the use of non-vibratory equipment, vibration monitoring, repair of structural damage, the installation of wave barriers, maximization of the distance between vibratory equipment and receivers, restriction of vibration-generating activities to daytime hours, and/or temporary relocation of affected residents. Construction vibration reduction measures shall be implemented to reduce vibration levels to FTA (2018) and Caltrans (2020) construction vibration thresholds. If project-level construction vibration cannot be reduced to at or below the FTA (2018) and Caltrans (2020) construction vibration thresholds, IEUA shall either (1) select an alternative site location that avoids exceeding the FTA (2018) and Caltrans (2020) construction vibration thresholds at the nearest historic sites, structures, and/or sensitive receivers, or (2) undergo subsequent CEQA documentation to assess potential site-specific vibration impacts from locating a future facility in close proximity to historic sites, structures, and/or sensitive receivers. If the individual project would be constructed concurrently with cumulative development projects located within a 600-foot radius of the individual project construction site, the vibration study shall also consider the cumulative impact of combined vibration levels at the nearest sensitive receivers by estimating the combined vibration levels receivers will experience during construction of individual projects and cumulative development; compare estimated vibration levels to applicable standards for vibration impacts related to structural damage and human annoyance identified by Caltrans (2020) and the FTA (2018); identify whether the individual project's contribution to any identified cumulative impact would be cumulatively considerable; outline any measures that may be used to reduce the project's contribution to combined vibration levels; and determine the amount of vibration reduction that would occur with implementation of these measures. Such measures may include, but are not limited to, the use of non-vibratory equipment, vibration monitoring, repair of structural damage, the installation of wave barriers, maximization of the distance between vibratory equipment and receivers, restriction of vibration-generating activities to daytime hours, and/or temporary relocation of affected residents. Construction vibration reduction measures shall be implemented to reduce cumulative vibration levels to Caltrans and FTA construction vibration thresholds. If cumulative construction vibration cannot be reduced to at or below the FTA (2018) and Caltrans (2020) construction vibration thresholds, IEUA shall either (1) select alternative site locations that avoid exceeding the FTA (2018) and Caltrans (2020) construction vibration thresholds at the nearest historic sites, structures, and/or sensitive receivers, or (2) undergo subsequent CEQA documentation to assess potential site-specific vibration impacts from locating a future facility in close proximity to historic sites, structures, and/or sensitive receivers.	IEUA

Impact Description	Impact After Mitigation
The Chino Basin contains extensive areas with noise sensitive land uses. Due to these substantial noise constraints and the installation of future noise-producing CBP facilities in locations where such noise sensitive uses may exist, a potential exists for significant noise impacts from implementation of the CBP. Noise conditions will be unavoidably altered by implementation of the proposed project, in both the short- and long-term, but this change in noise condition is not forecast to result in significant adverse impacts with implementation of mitigation measures listed above.	As described in Subchapter 4.14, several mitigation measures were identified to minimize noise impacts, including those that would: ensure construction noise minimization practices are in place; ensure that construction noise studies are conducted for specific CBP projects; ensure that construction noise and vibration reduction measures are implemented where identified in the site specific noise study, and where project-level construction noise cannot be reduced below significance thresholds, IEUA shall seek a variance from the local noise ordinance prior to initiating construction; ensure operational noise studies are conducted for specific CBP project sites with operational noise reduction measures implemented, where applicable, and ensure that where operational noise cannot be reduced to below significance thresholds at a specific site, an alternative location is selected or subsequent CEQA documentation shall be performed; ensure that vibration generating equipment operate outside of the minimum distances from sensitive receivers; ensure that minimal-vibration-producing equipment is used near historic structures; and, where construction must occur outside of the specified buffer distance intended to minimize construction related vibration, mitigation is implemented, where vibration levels cannot be reduced to below significance thresholds, an alternative location is selected or subsequent CEQA documentation shall be performed. With implementation of these mitigation measures, the project-related noise impacts can be reduced to a less than significant impact level.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
POPULATION AND HOUSING	
POP-1 If future CBP facilities must be located on parcels occupied by existing housing and displaces that housing as a result, IEUA will assist with a relocation plan in conformance with Section 7260 et seq. of the California Government Code ("California Relocation Assistance Law" or the "Act") to ensure that short- and long-term housing of comparable quality and value are made available to the occupant(s) prior to initiating construction of the facility.	IEUA

Impact Description	Impact After Mitigation
As described in Subchapter 4.15, the proposed project would not induce population growth beyond that which has been planned for in the City and County General Plans or SCAG planning documents. The proposed project is growth accommodating, but it does not in and of itself create opportunities for additional people to move to the region, nor to construct additional housing beyond those previously under consideration to accommodate the population envisioned within the applicable General Plans at buildout within each city and county located in the Chino Basin area. However, given that the locations of the proposed wells are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. Mitigation is required to reduce this impact to a level of less than significant.	As described in Subchapter 4.15, implementation of the CBP would not significantly induce growth within the Chino Basin; however, mitigation is provided to address the potential for CBP related facilities to displace housing and/or persons. This mitigation would ensure that the facilities associated with the CBP that are located on parcels containing housing would be minimized through the provision of short- and long-term housing of comparable quality, thereby minimizing impacts below significance thresholds. With implementation of this mitigation measure, the project-related population and housing impacts can be reduced below significance thresholds, and as such, the proposed project will not cause unavoidable significant population and housing impacts.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
PUBLIC SERVICES – FIRE PROTECTION	
PS-1 CBP facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites.	IEUA
PS-2 CBP facilities proposed to be located within vacant parkland or CBP facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland or (2) shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the CBP facility.	

Impact Description	Impact After Mitigation
Due to the limited population increase that would occur as a result of implementation of the CBP, the demand for public services (fire, sheriff, schools, libraries, etc.) would be minimal. However, it is anticipated that all sites containing facilities associated with the proposed project would be fenced in and contain security lighting, which would minimize the future need for police protection from trespass. Though a significant demand for police protection services is not anticipated, mitigation is proposed to address trespass issues. Additionally, construction and staging areas may result in the temporary closure of parks or portions of parks. However, several parks in the Chino Basin area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use due to the development of a CBP facility within the existing park. Additionally, there is a potential for wells or other CBP facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such mitigation is required to reduce this impact to a level of less than significant.	As described in Subchapter 4.16, implementation of the CBP would not significantly impact fire protection, police protection schools, recreation/parks or other public facilities. However, several mitigation measures were identified to minimize impacts to police protection and recreation/parks including those that would: minimize the potential for trespass that could exacerbate demand for police protection services; and, minimize the potential for loss of park or recreational facilities as a result of CBP projects through relocation or provision of supplemental parkland or recreation facilities. With implementation of these mitigation measure, the project-related police protection and park/recreation impacts can be reduced to a less than significant impact level.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
RECREATION REC-1 IEUA shall prepare subsequent CEQA documentation for any Park or Recreation facilities required to be developed as part of implementation of mitigation measure PS-2—i.e., in the event a CBP Facility would be result in loss of parkland or recreation facilities.	

Impact Description	Impact After Mitigation
Under the proposed WVWRP, no recreational facilities are proposed. As stated under Public Facilities, the development of CBP facilities may be located within parks or facilities designated for parks and/or recreation use. Construction and staging areas within parks and/or recreation facilities at which CBP facilities may be installed may result in the temporary closure of such facilities or portions of such facilities. However, several park and recreation facilities in the Chino Basin area would be available for use. This increased use of other park and recreation facilities would be temporary, during construction only. Once construction is completed, park and recreation facilities would return to serve their original purpose, with only slightly less land area available for such uses. In addition to CBP facility development within existing park and recreation facilities, there is a potential for CBP facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such, mitigation is required to reduce this impact to a level of less than significant. Additionally, depending on the area required for the given CBP facility, an individual project could result in the removal of all or a portion of a park or recreational facility. As such, mitigation is required to ensure that, should loss of recreation or park facilities occur, replacement occurs resulting in impacts to recreational facilities are minimized.	As described in Subchapter 4.17, implementation of the CBP would not significantly impact recreation. However, mitigation identified under Public Services that would minimize the potential for loss of park or recreational facilities as a result of CBP projects would minimize impacts under this issue as well. Furthermore, mitigation is provided to ensure that, should construction of recreation or park facilities be required as a part of the CBP, a subsequent CEQA determination will be prepared to ensure that impacts are appropriately assessed and mitigated. With implementation of this mitigation measure, the project-related recreation impacts can be reduced below the level of significance, and as such, the proposed project will not cause unavoidable significant recreation impacts.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
TRANSPORTATION / TRAFFIC TRAN-1 <u>Prepare and Implement Construction Transportation Management Plan</u> A construction Transportation Management Plan (TMP) shall be developed and implemented by IEUA in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to: <u>Construction Traffic Routes and Staging Locations:</u> The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable. Damage Repair: The TMP shall include the following requirements to minimize damage to the existing roadway network: • A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water conveyance pipelines. • The roadway network along the proposed water distribution alignment(s) shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report. • Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and IEUA or its contractors shall repair all damage. Coordination with Emergency Services: The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public rights-of-way if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized. Coordination with Active Transportation Facilities: The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points. Coordination with SBCTA: If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with SBCTA and Metrolink. Coordination with Caltrans: If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines. Coordination with Nearby Construction Sites: The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following: • All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures • All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips • IEUA, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.	

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
Transportation Control and Safety: The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders. Plan Approval: The TMP shall be submitted to SBCTA and the respective city community development departments for review and approval.	

Impact Description	Impact After Mitigation
Since transportation system facilities occur throughout much of the Chino Basin and the installation of future water infrastructure facilities can directly impact roadways or traffic on such roadways, a potential for significant transportation/traffic impacts from implementation of the CBP was identified in Subchapter 4.18. Construction requires mitigation to implement Transportation Management Plan (TMP). In the long-term, operation of the CBP will generate minimal traffic. Ultimately, operation of the CBP would not generate a significant traffic impact and no operational mitigation is required.	Impacts to nearby roadways during construction can be mitigated through implementation of mitigation to ensure that a TMP is put in place. This mitigation would minimize impacts to transportation from construction by requiring all construction activities to be conducted in accordance with an approved construction traffic management plan. With implementation of this mitigation measure, the project-related transportation impacts can be reduced below the level of significance, and as such, the proposed project will not cause unavoidable significant recreation impacts.

	Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
	TRIBAL CULTURAL RESOURCES	
TCR-1	Where a future discretionary project requiring additional CEQA review occurs within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site, water treatment facility, or wastewater treatment plant site), IEUA shall notify the San Manuel Band of Mission Indians, but will point out that the project falls under the CBP evaluation and that the site is fully developed. No further cultural resources or TCR investigation will be conducted unless the Tribe identifies specific TCR resources/values at such site(s).	IEUA
TCR-2	Where a future discretionary project requiring additional CEQA review occurs at an undisturbed site, IEUA shall notify the San Manuel Band of Mission Indians (SMBMI) to provide the Tribe with an opportunity to consult on the project. The provisions of CUL-2 through CUL-4, as well as TCR-3 shall then be followed through.	IEUA
TCR-3	If the San Manuel Band of Mission Indians (SMBMI) request to consult, the terms of the Mitigation Measures provided by the Tribe shall be applied to the project, where applicable, and as follows: SM-CUL-1 Archaeological Monitoring and Testing At least one archaeologist with at least 3 years of regional experience in archaeology and a Tribal monitor representing the San Manuel Band of Mission Indians shall conduct subsurface archaeological testing on the project site via the employ of a number of subsurface investigative methods, including shovel test probes, remote sensing, and/or deep testing via controlled units or trenching of appropriate landscapes, with a sample size of at least 25% of the area of concern dug and dry-sifted through 1/8-inch mesh screens, prior to any ground-disturbing activity. A Testing Plan shall be created by the archaeologist and submitted to the SMBMI and IEUA for review at least 10 business days prior to implementation, so as to provide time to review/modify the Plan, if needed. The Plan shall outline the protocol of	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
presence/absence testing and contain a Treatment Plan detailing that 1) no collection of artifacts or excavation of features shall occur during testing, and 2) all discovered resources shall be properly recorded and reburied in situ. If the results of testing, as approved by SMBMI, are positive, then SMBMI and IEUA shall, in good faith, consult concerning appropriate treatment of the finding(s), guidance for which is outlined in SM-TCR-1. If the results of testing, as approved by SMBMI, are negative, then SMBMI will conclude consultation unless any discoveries are made during project implementation. Any and all discoveries made during project implementation shall be subject to the Treatment Plan outlined within the Testing Plan developed as described above and the guidelines contained in SM-TCR-1. If resources are identified during testing as described above, an archaeological monitor and a Tribal monitor from SMBMI with at least 3 years of regional experience in archaeology shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the IEUA for dissemination to the SMBMI. Once all parties review and approve the plan, it shall be adopted by the IEUA – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan. SM-TCR-1 <u>Treatment of Cultural Resources</u> If a pre-contact cultural resource is discovered during archaeological presence/absence testing, the discovery shall be properly recorded and then reburied in situ. A research design shall be developed by the archaeologist that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI), the archaeologist, and the IEUA shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), avoidance (or other appropriate treatment) of the discovered resource, and the potential need for construction monitoring during project implementation. Should any significant resource and/or TCR not be a candidate for avoidance or preservation in place, and the removal of the resource(s) is necessary to mitigate impacts, the research design shall include a comprehensive discussion of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by SMBMI. All plans for analysis shall be reviewed and approved by IEUA and SMBMI prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of SMBMI that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by SMBMI and the IEUA, and all finds shall be	

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to IEUA, CHRIS, and SMBMI. All reburials are subject to a reburial agreement that shall be developed between the landowner and SMBMI outlining the determined reburial process/location, and shall include measures and provisions to protect the reburial area from any future impacts (vis a vis project plans, conservation/preservation easements, etc.). Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with SMBMI to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Lead Agency/Developing Agency to pay for those fees. All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the IEUA and SMBMI for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the IEUA, and SMBMI. SM-TCR-2 <u>Inadvertent Discoveries of Human Remains/Funerary Objects</u> In the event that any human remains are discovered within the project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately who shall notify SMBMI and the IEUA. The IEUA shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD, and IEUA to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98. Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall	

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
not be subject to future subsurface disturbances. The IEUA should accommodate on-site reburial in a location mutually agreed upon by the Parties. It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and IEUA, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).	

Impact Description	Impact After Mitigation
As described in Subchapter 4.19 of this DPEIR, the San Manuel Band of Mission Indians requested continued participation with this project's CEQA process and future project implemented under the CBP. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures, impacts to Tribal Cultural Resources are considered less that significant.	Through incorporation of mitigation measures, impacts to Tribal Cultural Resources are considered less that significant. The mitigation measures provide a hierarchy from which to approach future CBP projects, involving (1) notification to the three tribes at project sites that have been totally disturbed; (2) at undisturbed project sites, AB 52 consultation will be initiated and a records search shall be performed as part of a site specific Phase I evaluation, and the site shall be surveyed; and (3) further site-specific study of large scale projects, tribal and archaeological monitoring, and , and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects. Thus, with implementation of mitigation to protect tribal cultural resources, the project would not cause significant unavoidable adverse impacts to tribal cultural resources

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
UTILITIES AND SERVICE SYSTEMS		
UTIL-1	Implementation of a Drainage Plan to Reduce Downstream Flows. Prior to issuance of permits for construction of project facilities, IEUA shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites (consistent with MS4 requirements) so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.	IEUA
UTIL-2	For future CBP projects that do not have access to electrical or natural gas connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet electricity and/or natural gas needs at a future CBP facility site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical or natural gas infrastructure.	IEUA
UTIL-3	For future CBP projects that do not have access to telecommunication connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet telecommunication needs at a future CBP facility site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical or natural gas infrastructure.	IEUA

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
UTIL-4	Should the agencies operating the brine disposal systems (Orange County Sanitation District [OCSD]and Los Angeles County Sanitation District [LACSD]) determine that the capacity requested on behalf of CBP operations is greater than that which can be accommodated with existing treatment capacities, subsequent CEQA documentation addressing the required facility expansions shall be prepared. I.e., should the CBP require access to greater capacity from an existing brine disposal system (including the IEBL, the NRWS, or the Etiwanda Wastewater Line [EWL]) beyond that which can be accommodated by existing facilities--excluding pipeline connections required to connect CBP facilities to these brine disposal systems (such as the 8,200 LF proposed to be installed as part of the CBP)—subsequent CEQA documentation shall be prepared.	IEUA
UTIL-5	The contract with demolition and construction contractors for a given CBP project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given CBP project shall submit a recycling plan to IEUA for review and approval prior to issuance of permits for the construction of demolition/construction activities.	IEUA
UTIL-6	The contract with demolition and construction contractors for a given CBP project shall include the requirement that all soils that are planned to be exported from the site that can be recycled shall be recycled for re-use; alternatively, soils shall be reused on site to balance soil import/export.	IEUA

Impact Description	Impact After Mitigation
Subchapter 4.20 concluded that implementation of the CBP could significantly impact stormwater drainage, energy, natural gas telecommunications, or solid waste as a result of requiring the construction or extension of such utilities as a result of development of the CBP. This is because the proposed CBP may be developed within sites that would require extension of or that may impact existing utility service systems. The provision of sufficient water supply within the Chino Basin could be impacted significantly by the development of the CBP without the implementation of mitigation. Additionally, the CBP could impact wastewater system capacities as a result of demand on brine conveyance and treatment systems that are required in order to support the project. The CBP could also generate solid waste that could be in excess of landfill capacities or could conflict with the applicable regulations pertaining to the disposal of solid waste. Mitigation is required in order to ensure significant solid waste impacts do not occur. Furthermore, as discussed under Subchapter 4.20 of this DPEIR, the proposed CBP could result in significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD thresholds for construction activities, thus the extension and construction of new water and wastewater facilities would result in a potentially significant impact.	Subchapter 4.20 concluded that implementation of the CBP would not significantly impact stormwater drainage, energy, natural gas telecommunications, or solid waste. Additionally, mitigation is required to minimize impacts related to stormwater through implementation of a drainage plan to reduce downstream flows for future CBP projects. Mitigation is required to address potential impacts related to solid waste including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities; and ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycling and ultimately reuse, thereby diverting this waste stream from the local landfill. The construction of infrastructure related to energy and natural gas was analyzed and determined to be less than significant with the implementation of mitigation. This mitigation would ensure that CBP projects not located in an area containing adjacent access to electricity and natural gas infrastructure would require subsequent CEQA documentation. With implementation of this mitigation the proposed project will not cause unavoidable significant adverse impacts to energy or natural gas. The construction of infrastructure related to telecommunications was determined to be less than significant with the implementation of mitigation. This mitigation would ensure that CBP projects not located in an area containing adjacent access to telecommunication infrastructure would require subsequent CEQA documentation. With implementation of this mitigation the proposed project will not cause unavoidable significant adverse impacts to telecommunications.

Environmental Category /Avoidance, Minimization and Mitigation Measures	Responsible Agency
	Based on the facts and findings presented in the DPEIR analysis, the proposed project will not cause unavoidable significant adverse impacts to stormwater drainage, energy, natural gas, telecommunications, or solid waste. Implementation of mitigation measures pertaining to solid waste would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities; ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill; and, ensure that recyclable waste streams are diverted from the local landfill, thereby ensuring compliance with the required 50 percent waste diversion mandated by the State and minimize the potential for CBP projects to generate waste in excess of local landfill capacities. The topic of water and wastewater infrastructure were also discussed in Subchapter 4.20. The extension of water and wastewater related infra-structure was determined to be potentially significant. However, the provision of sufficient water supply within the Chino Basin was determined to be less than significant with the implementation of mitigation that would minimize impacts related to loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, and/or result in new subsidence. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties within the Chino Basin. The mitigation is extracted from Subchapter 4.11, Hydrology and Water Quality (discussed above) and would create a hierarchy of checks and balances as part of the sustainable management of the Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact. Additionally, the provision of sufficient wastewater treatment capacity at area wastewater treatment plants would be ensured through mitigation that would ensure subsequent CEQA documentation is required where the overall CBP would require greater brine conveyance capacity than area brine disposal facilities can accommodate. As such, impacts related to wastewater treatment capacities at area and regional facilities would be less than significant with the implementation of mitigation. However, as discussed under Subchapter 4.20 of this DPEIR, the proposed CBP could result in significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
	activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030 that would result from the extension of water- and wastewater-related infrastructure. Such construction of the CBP has the potential to hinder statewide GHG emissions targets, and therefore the proposed CBP could result in significant and unavoidable GHG impacts related to construction of new or expansion or modifications to existing water and wastewater facilities.	

Environmental Category /Avoidance, Minimization and Mitigation Measures		Responsible Agency
WILDFIRE		
WF-1	Prior to initiating construction of proposed facilities within public rights-of-way (ROW), IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW.	IEUA
WF-2	Prior to construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (FHSZs) by CAL FIRE, fire hazard reduction measures shall be incorporated into a fire management plan/fuel modification plan for the proposed facility, and shall be implemented during construction and over the long-term for protection of the site. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that can include a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site shall have access to functional fire extinguishers and related fire prevention equipment (such as emergency sand bags, etc.) at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by the IEUA and provided to CAL FIRE for review and comment, where appropriate, and approved prior to construction within high and very high FHSZs and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high FHSZ to minimize fire exposure and damage to a level acceptable to the IEUA over the long-term.	IEUA

Impact Description	Impact After Mitigation
The location of CBP facilities would likely not be located in designated very high fire hazard severity zones, but since many of the proposed CBP facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas.	The analysis of wildfire issues in Subchapter 4.18 impacts from implementing the CBP are less than significant with mitigation incorporated. Mitigation was identified to minimize impacts to wildfire (gathered from other sections of the IS) that would: reduce the project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan; and, ensure fire hazard reduction measures are incorporated into a fire management plan/fuel modification plan for the proposed facility. Thus, with implementation of mitigation to minimize wildfire impacts, the project would not cause significant unavoidable adverse impacts under wildfire.

Table 1.6-1
TABULAR COMPARISON OF PROJECT ALTERNATIVES

	Would the Project/Alternative Result in Significant Adverse Impacts to the Resource Issues of …?				**Which is the environmentally superior Alternative?**
	Chino Basin Program (CBP)	**No Project Alternative (NPA**	**Alternative 1: Baseline Compliance Plan (BCPA)**	**Alternative 2: Regional Water Quality and Reliability Plan**	
Aesthetics	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Agricultural	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Air Quality	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Biological Resources	Yes	No	No	Yes	NPA and BCPA are equal
Cultural Resources	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Energy	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Geology & Soils	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Greenhouse Gas	Yes	No	Yes	Yes	NPA
Hazards & Hazardous Materials	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Hydrology & Water Quality	No	Yes	No	No	CBP, BCPA and Alternative 2 are equal
Land Use & Planning	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Mineral Resources	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Noise	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Population & Housing	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Public Services	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Recreation	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Transportation & Traffic	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Utilities & Service Systems	Yes	Yes	No	Yes	BCPA
Wildfire	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Would Meet Project Objectives?	Yes	No	Some	All Except One	-

CHAPTER 2 – INTRODUCTION

2.1 BACKGROUND

The Inland Empire Utilities Agency (IEUA or Agency) serves as a wholesale imported water distributor for the Chino Groundwater Basin (Chino Basin) and provides industrial/municipal wastewater collection and treatment and other related utility services for the western portion of the Santa Ana River watershed in the southwestern-most portion of San Bernardino County. Current services provided or programs supported by IEUA also include: production of recycled water; sewage collection and treatment; distribution of imported and recycled water supplies; co-composting of manure and municipal biosolids; desalinization of groundwater supplies; renewable energy generation; and disposal of non-reclaimable industrial wastewater and brine.

IEUA and its local partners have developed long-term plans to implement a variety of new infrastructure to meet future needs for wastewater treatment and potable water supplies while increasing resiliency and sustainability of regional water resources management. The CBP provides an opportunity to implement critical long-term project components of these plans, addressing local, regional, and potentially statewide and federal water resources management issues. The CBP is a revolutionary, first-of-its-kind program designed to help the region move beyond traditional water management practices and into a new era of water use optimization. The CBP promotes proactive investment in managing the water quality of the Chino Basin and in meeting regional water supply reliability needs in the face of climate change, while leveraging California's interregional plumbing system and the Chino Basin's future potential for water recycling to produce benefits to local, State and federal interest.

The CBP was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded $206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed as a 25-year conjunctive use project that would develop and utilize a new AWPF to treat and store up to 15,000 acre feet per year (AFY) of recycled water in the Chino Basin and extract the water during call years, which will likely be in dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new advanced water purification facility (AWPF) and through groundwater storage by operation of new injection wells. The CBP would thereby enable IEUA to dedicate a commensurate amount of this "new" water locally generated from the AWPF to remain in the State Water Project system up at Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits.

The CBP has identified the following project objectives, which also help address local, State and federal objectives as follows:

- **Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin:** The project provides groundwater recharge facilities to recharge high quality recycled water, thus reducing TDS levels within the Chino Groundwater Basin.
- **Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin:** With the implementation of AWPF with an expected effluent concentration of 100 mg/L, the recycled water TDS will be significantly reduced.
- **Develop Infrastructure That Addresses Long Term Supply Vulnerabilities:** The CBP would improve the use of recycled water at a regional level through new regional pipelines

enabling greater potential access to recycled water and enhances local groundwater supplies through the installation of additional extraction wells and through the installation of new wellhead treatment systems that would bring existing out-of-service wells online.

- **Provide a Source of Water for Emergency Response:** The project results in 15,000 AFY in local supplies which can be used to augment the water supply portfolio during unplanned or catastrophic events.
- **Develop an Integrated Solution to Produce State and Federal Environmental Benefits:** The project develops a highly reliable new water supply formally dedicated to environmental benefit that can be deployed dynamically and managed flexibly to address varying and changing ecological needs.

Pursuant to Section 15060(d) of the CEQA Guidelines, upon finding that the proposed CBP might have one or more significant effects on the existing project environment and surrounding environment, IEUA determined that an environmental impact report (EIR) should be prepared to address potential impacts from the CBP. Thus, IEUA prepared this Chino Basin Program Draft Environmental Impact Report (DPEIR or Draft PEIR) that evaluates the potential broad scope or programmatic environmental impacts that would result from constructing and implementing the proposed project. The information CEQA and the CEQA Guidelines require to be included in an EIR is included in this DPEIR, and it addresses each of the 20 topics identified in Appendix G of the CEQA Guidelines, as follows: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire.

2.2 PURPOSE AND USE OF AN EIR

CEQA was adopted to further the Legislature's goal of maintaining the quality of the environment for the people of the State. Compliance with CEQA, and its implementing CEQA Guidelines, requires an agency making a decision on a project (defined as an action that can change the physical environment) to consider that project's potential environmental effects/impacts before granting any discretionary approvals or entitlements for it. Further, the State adopted a policy "that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects." Thus, an agency, in this case IEUA, must examine feasible alternatives and identify feasible mitigation measures as part of the environmental review process. CEQA also states "that in the event specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof." (Public Resources Code § 21002.)

When applied to a specific project, such as the proposed CBP, the reviewing agency is required to identify the potential environmental impacts of implementing the project and, where potential significant impacts are identified, must determine whether there are feasible mitigation measures or alternatives that can be implemented to avoid or substantially lessen the significant environmental effects of a project. The first step in this process—determination that an EIR is required and issuance of a Notice of Preparation of an EIR (NOP)—has been completed for the CBP. This constitutes the "project being considered for approval and implementation" by IEUA. IEUA has now prepared this DPEIR to address any potential significant impacts that may result from implementation of the proposed CBP project.

As stated above, the following environmental issues will be analyzed in this DPEIR: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire.

2.2.1 NOP and Scoping Meeting Comment Letters and Responses

IEUA prepared and circulated a Notice of Preparation (NOP) for the project. The NOP public review period through the State Clearinghouse began on September 16, 2021 and ended on October 15, 2021. Respondents were requested to send their input as to the scope and content of environmental information and issues that should be addressed in the DPEIR no later than 30 days after receipt of the NOP. The NOP was distributed to interested agencies, the State Clearinghouse (SCH# 2021090310), and a list of interested parties compiled by IEUA. IEUA held a scoping meeting on October 6, 2020 at 6 p.m. at the IEUA's Agency Headquarters Board Room located at 6075 Kimball Avenue, Building A, Chino, CA 91708. The date, time and location of the scoping meeting were announced in the NOP.

IEUA received seven written responses to the NOP but received no comments, written or oral, at the scoping meeting. The seven written comments are summarized below, and a brief response to each issue organized by environmental topic is provided following the summary of each comment letter. Copies of each letter are provided below in Subchapter 8.2. The location where the issues raised in the comments are addressed is described in the following text.

Comment Letter #1 from California State Water Resources Control Board, Division of Drinking Water (DDW) (dated 10/11/21) states:

- *DDW would like to see the following addressed in the EIR:*
  - *Include a list of all the water systems within the Project, the water system's number, and water system components that will be added to each system that will trigger a drinking water supply permit amendment.*
  - *Include a description of these new or modified components of the Project in enough detail to determine if a new water supply permit or permit amendment will be required.*
  - *Provide a project site map that includes all new or modified water system components with the water system they belong to.*
  - *Include the State Water Resources Control Board, Division of Drinking Water, in any list of agencies that will be approving a permit, and the drinking water permit(s) mentioned under any list of permits needed.*

Comment Letter #2 from Native American Heritage Commission (NAHC) (dated 9/20/21) states:

- *This letter summarizes the applicability of AB 52 and SB 18 to a given project.*
- *This letter summarizes AB 52 requirements.*
- *This letter summarizes SB 18 requirements.*
- *This letter summarizes recommendations for Cultural Resource Assessments as follows:*
  - *The IEUA should contact the appropriate California Historical Research Information System (CHRIS) Center for an archaeological records search.*
  - *Archaeological surveys, where required, should be prepared in a professional report.*

- *The NAHC should be contacted for a sacred lands file search and to procure a Native American Tribal Consultation List.*
- *Lack of surface evidence does not preclude the existence of subsurface evidence and as such, the IEUA should include mitigation that addresses the potential for inadvertent discovery, provisions for the deposition of cultural items, and include provisions for the treatment and disposition of native American human remains.*

Comment Letter #3 from the San Bernardino County Department of Public Works (dated 10/12/21) states:

- *This letter advises that the project may alter existing or future storm drains and as such is subject to the San Bernardino County Flood Control District's (SBCFCD) Comprehensive Storm Drain Plans (CSDP) and Master Plans of Drainage (MPD): CSDP 1: Rancho Cucamonga, Chino Airport Master Storm Drain Plan (MSDP), Chino Hills MPD, Chino Hills Area MPD, and W. Cucamonga MPD, CSDP 2: Upland MPD, Ontario MPD, Montclair MPD, Fontana MPD, and Chino MPD.*
- *Impacts associated with the project's occurrence in the Flood Zones mentioned and mitigation should be discussed within the Draft EA prior to adoption by the IEUA.*
- *IEUA enforce, at a minimum, the most current FEMA regulations for construction within a Special Flood Hazard Area (SFHA) and coordinate the project with the U.S. Army Corps. of Engineers (USACOE) within the Prado Dam Inundation area.*
- *Any encroachments on SBCFCD right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from SBCFCD prior to start of construction. The necessity for permits, and any impacts associated with them, should be addressed in the project environmental documents prior to adoption and certification.*

Comment Letter #4 from the South Coast Air Quality Management District (SCAQMD) (dated 10/12/21) states:

- *In order to ensure that impacts from the permits are fully and adequately evaluated as required under CEQA Guidelines Section 15096(b), it is recommended that the IEUA initiate consultation with South Coast AQMD.*
- *Staff recommends that the IEUA use South Coast AQMD's CEQA Air Quality Handbook and website as guidance when preparing the air quality and greenhouse gas analyses.*
- *It is also recommended that the IEUA use the CalEEMod land use emissions software*
- *Staff recommends that the IEUA quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds and localized significance thresholds (LSTs) to determine the project's air quality impacts.*
- *The IEUA should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project, including both construction and operational impacts.*
  - *Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips).*
  - *Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust).*

- *Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.*
- *Emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA operational thresholds to determine the level of significance.*

- *If the project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the IEUA perform a mobile source health risk assessment.*
- *In the event that the project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Several resources to assist the IEUA with identifying potential mitigation measures for the project include:*
  - *South Coast AQMD's CEQA Air Quality Handbook.*
  - *South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan.*
    Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.

Comment Letter #5 from the City of Ontario (dated 10/14/21) states:

- *The Project Description should include the following:*
  - *Describe the Agency participation and financing for the Program and expand on how it is anticipated that the program will be paid for at a local level.*
  - *Describe the administration of performance criteria during call years for participating and non-participating agencies, including limitations on access to imported water for either participating or non-participating agencies.*
  - *Identify the sources and supply of recycled water to be treated and pledged to the program, and include a description of the Project's compliance with participating agency's Right to First Purchase of treated wastewater per the Regional Sewerage Contract.*
- *The City of Ontario believes that the program objectives should be modified as follows:*
  - *Objective 3, which states "Develop infrastructure that addresses long term supply vulnerabilities" should be removed and replaced with the City's proposed Objective 7.*
  - *Objective 4 should be revised to state "provide a **local** source of water…"*
  - *Objective 5 should be revised to state "Enhance recharge **(injection wells and/or recharge basins)** and…"*
  - *Objective 6 should be revised to state "Develop a solution to produce environmental benefits by enhancing local supply and reducing reliance on important water."*
  - *Proposed Objective 7, which Ontario proposes should replace Objective 3, states "Develop local water resources by utilizing recycled water locally in the Chino Groundwater Basin to meet the current and future needs of a growing region"*
  - *Proposed Objective 8 states "Minimize the need for additional infrastructure by optimizing existing infrastructure."*
  - *Proposed Objective 9 states "Comply and be consistent with the Regional Sewerage Contract, including but not limited to compliance with each Contracting Agency's Right of First Purchase of treated wastewater."*
- *The City of Ontario proposes there be an alternative defined as the Local Control and Supply Alternative that evaluates treating and injecting, what they believe to be, currently*

underutilized recycled water in the Chino Groundwater Basin for local use with no export or in-lieu elements, to include the following components:

- *Make beneficial use of recycled water currently being discharged to the Santa Ana River.*
- *Develop a local supply by advance treated recycled water which would be available to agencies in any given year, enabling agencies to reduce reliance on imported water.*
- *Provide purified water pumping and conveyance for groundwater injection (injection wells and/or recharge basins).*
- *Implement and be consistent with the rights of contracting parties pursuant to the Regional Sewage Contract.*
- *This alternative would not include the following components:*
  - *Groundwater extraction and treatment*
  - *Potable water pumping and conveyance*
  - *Potable water usage (MWD pump-back or in-lieu)*
- *This alternative would only include PUT components with participating agencies extracting the advanced water from the Basin using existing infrastructure.*

Comment Letter #6 from the California Department of Fish and Wildlife (CDFW) (dated 10/14/21) states:

- *The CDFW letter addresses CDFW's role as a trustee and responsible agency.*
- *CDFW recommends that the EIR specifically include:*
  - *An assessment of the various habitat types, and a map that identifies the location of each habitat type.*
  - *A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected.*
  - *A complete, recent inventory of rare, threatened, endangered, and other sensitive species within, as well as any offsite areas with the potential to be affected.*
- *CDFW strongly encourages that future climate or demographic changes that will affect the sustainable management of a groundwater basin, as well as environmental uses and the hydrologic links between surface and groundwater be incorporated.*
- *CDFW recommends that the EIR utilize a hybrid approach to cumulative impacts, with a list of past, present, and probable future projects/activities being considered in combination with baseline conditions, projections, and adopted planning documents.*
- *The 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are "losing reaches" characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are "gaining reaches" characterized by groundwater discharge. CDFW again urges that this, along with other available data, be used to analyze the potential cumulative impacts of the Program.*
- *CDFW recommends that IEUA utilize the Basin Technical Advisory Committee (BTAC) findings and continue to collaborate to ensure groundwater and surface water impacts are adequately evaluated and considered.*
- *CDFW attached notable goals, objectives, and performance monitoring and asks that IEUA keep these in mind when preparing the EIR*:
  - *Approximately 70% of the supply is of local origin coming from local groundwater, local precipitation and surface flows, and recycled water*

  - *Maintain reliable and resilient water supplies and reduce dependency on imported water.*
  - *Manage at the watershed scale for preservation and enhancement of the natural hydrology to benefit human and natural communities.*
  - *Preserve and enhance the ecosystem services provided by open space and habitat within the watershed.*
- *CDFW recommends that the EIR address a reasonable range of alternatives, including the no project alternative, which should address climate change and drought that may affect the community.*
- *CDFW indicates that the EIR should identify mitigation measures and alternatives to avoid or minimize potential impacts to the extent feasible:*
  - *The EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to any project or activity within the Program, or that may be impacted due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors.*
  - *The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from direct and indirect impacts.*
  - *California Species of Special Concern (CSSC) should be considered during the environmental review process.*
  - *CDFW considers adverse impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for these adverse impacts.*
  - *The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values.*
  - *If sensitive species and/or their habitat may be impacted, CDFW recommends the inclusion of specific mitigation in the EIR.*
  - *CDFW recommends that the EIR specify mitigation that is roughly proportional to the level of impacts.*
  - *Plans for restoration and revegetation should be prepared by persons with expertise in Southern California ecosystems and native plant restoration techniques. CDFW outlines what the plans should entail.*
  - *CDFW recommends that the EIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site.*
  - *To avoid direct mortality, CDFW recommends that the IEUA condition the EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities.*
  - *CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species*
  - *CDFW recommends that the EIR address all Project impacts to listed species and specify a mitigation monitoring and reporting program that will meet the requirements of the California Endangered Species Act (CESA).*

- *CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Public Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the PEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments.*
- *To ameliorate the water demands of this Project, CDFW recommends incorporation of water-wise concepts in project landscape design plans.*
- *CDFW requests that the IEUA report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB).*
- *CDFW notes the required filing fees*

Comment Letter #7 from the Orange County Water District (OCWD) (dated 10/14/21) states:

- *OCWD states it believes that IEUA must divert 17,000 AFY of tertiary recycled water to the Santa Ana River (SAR) or its tributaries above the Prado Dam.*
- *OCWD relays support for IEUA's effort to utilize wastewater to meet growing demands and reduce independence on imported water, while also complying with the Basin objective for TDS.*
- *OCWD recharges all baseflow of the SAR discharged from Prado Dam, and as such, if the CBP would reduce flows to the SAR, OCWD assumes it will need to increase reliance on imported water.*
- *OCWD states that the EIR should discuss and quantify the change in the amount of imported water to Southern California during an average year and over the 25-year lifespan of the CBP that would result from its implementation.*
- *OCWD states that the EIR should analyze and quantify the biological benefit to Salmonids by accounting for the change in imported water needs of Southern California as a whole as a result of the CBP.*
- *OCWD states that the EIR should analyze and quantify the greenhouse gas emissions by accounting for the CBP's impact on Southern California's total imported water needs.*
- *Should the CBP result in the removal of 17,000 AFY of surface water from the Santa Ana River Watershed, biological impacts could occur, and should therefore be sufficiently analyzed to determine whether there would be negative impacts to the Prado Basin riparian habitat. Mitigation should be addressed to ensure specific actions are taken to minimize negative consequences of the CBP.*

A brief response to each issue raised is provided below organized by Chapter and environmental topic.

Chapter 3: Project Description

Comment Letter #1 (DDW): The comment letter supplied by the DDW requested a list of all the water systems within the CBP, the water system's number, and water system components that will be added to each system that will trigger a drinking water supply permit amendment, and a description of these new or modified components of the project in enough detail to determine if a new water supply permit or permit amendment will be required. Additionally, DDW requested a project site map that includes all new or modified water system components with the water system they belong to, and the inclusion of the DDW in the list of agencies from which the CBP implementation would require permits, as well as a list of the types of permits required.

Response: The water systems, water system numbers, components, and descriptions thereof of facilities requiring drinking water supply permits cannot yet be supplied to DDW, as the specific

details of what connections will be required have not yet been defined. At this time, the water agencies that have expressed an interest in future connections to the CBP facilities are Jurupa Community Services District (JCSD), Cucamonga Valley Water District (CVWD), and Fontana Water Company (FWC). The water system numbers of these agencies are as follow:

- *JCSD – 3310021*
- *CVWD – 3610018*
- *FWC – 3610041*

Other member agency water systems may connect to CBP infrastructure in the future, but it is not known at this time which additional agencies and water systems would connect to the CBP infrastructure. IEUA and its CBP partner agencies are aware that water system permit amendments will be required and will facilitate the application for water system permits applied when the project specific details are known, which is anticipated to be during the design phase. Detailed descriptions of the project components are found in the Project Description, but as stated above, specific sites and connections have not yet been selected. The figures that have been prepared for the proposed project in the Project Description depict the PUT and TAKE Alternatives, and at this time, these are the most detailed figures available. The DDW is included in the list provided under Subchapter 3.13, Entitlements, Approvals and Other Agency Participation, found in the Project Description along with the anticipated types of permits to be required.

Comment Letter #5 (Ontario): The comment letter supplied by the City of Ontario requests that: the CBP Objectives be revised (Objectives), the project description describe the Agency participation and financing for the Program and expand on how it is anticipated that the program will be paid for at a local level (Financing), the project description describe the administration of performance criteria during call years for participating and non-participating agencies, including limitations on access to imported water for either participating or non-participating agencies (Imported Water), and the project description identify the sources and supply of recycled water to be treated and pledged to the program (Recycled Water Source), and include a description of the Project's compliance with participating agency's Right to First Purchase of treated wastewater per the Regional Sewerage Contract (RFP Compliance).

Response (Objectives): CEQA does not require a lead agency to modify its project objectives in deference to comments responding to a NOP. The Objectives that have been suggested by the City of Ontario would fundamentally alter the purpose and objectives of the CBP project. Furthermore, the Objectives that have been identified in the Project Description for the CBP were developed in conjunction with the description of the project as IEUA submitted it for Proposition 1 – Water Storage Investment Program (WSIP) funding. As such, it is imperative that the Objectives remain as follows (and as extracted from Chapter 3, the Project Description):

- *Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin.*
- *Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin.*
- *Develop Infrastructure That Addresses Long Term Supply Vulnerabilities.*
- *Provide a Source of Water for Emergency Response.*
- *Develop an Integrated Solution to Produce State and Federal Environmental Benefits.*

Response (Financing): IEUA appreciates Ontario's comment. Financing of the CBP has been addressed in CBP Workshops, and is specifically addressed in the WSIP Feasibility Study Report

and the Carollo TM called "Chino Basin Program Rate Impact Analysis – October 2021", which have been made available to all IEUA member agencies for comment, including the City of Ontario. The financing of the CBP is not a CEQA issue, and is therefore not addressed in this DPEIR.

Response (Imported Water): This question was previously asked, and the response that was provided stated that CBP performance does not reduce imported water availability to IEUA agencies. CBP Participating Agencies will take stored CBP water and use it locally in-lieu of purchasing water from Metropolitan.

Response (Recycled Water Source): The question was previously asked and the response that was provided stated that the AWPF recycled water for the CBP will be from Participating Agencies.

Response (RFP Compliance): The question was previously asked and the response that was provided stated that CBP-participating agencies will have first priority to CBP-water supplies.

Comment Letter #6 (CDFW): CDFW attached notable goals, objectives, and performance monitoring and asks that IEUA keep these in mind when preparing the EIR; these are:

- Approximately 70% of the supply is of local origin coming from local groundwater, local precipitation and surface flows, and recycled water.
- Maintain reliable and resilient water supplies and reduce dependency on imported water.
- Manage at the watershed scale for preservation and enhancement of the natural hydrology to benefit human and natural communities.
- Preserve and enhance the ecosystem services provided by open space and habitat within the watershed.

Response: The proposed project would aim to contribute to localizing the water supply, as it would reduce dependency on imported water through the provision of 15,000 AFY of advanced purified water that would be injected into the Chino Basin. IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD (referred to as in lieu). MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The benefits and objectives of the CBP are described in Chapter 3, the Project Description.

Furthermore, the CBP DPEIR provides substantial data regarding the region's natural resources; future management of both biology and hydrological resources; and ecosystem values. As stated above, the vast majority of site-specific impacts are shown as occurring within urban areas, not within sensitive habitats. Loss of sensitive habitat without mitigation is not anticipated. The CBP is intended to be overlaid atop the ongoing Chino Basin water management programs, and when implemented will maintain resilience and the ability to continue to use recycled water for recharge into the Chino Groundwater Basin. These findings are substantiated in the DEIR, primarily the hydrology and water quality (Subchapter 4.11), and biology (Subchapter 4.5) sections.

Comment Letter #7 (OCWD): The OCWD comment letter states that OCWD believes that IEUA must divert 17,000 AFY of tertiary recycled water to the Santa Ana River (SAR) or its tributaries above the Prado Dam.

Response: OCWD is correct in this assumption, and this is outlined in Subsection 3.5.3 of the Project Description.

Comment Letter #7 (OCWD): The OCWD comment letter relays support for IEUA's effort to utilize wastewater to meet growing demands and reduce independence on imported water, while also complying with the Basin objective for TDS.

Response: IEUA appreciates OCWD's comments. How the CBP would utilize wastewater to meet growing demands and reduce independence on imported water, while also complying with the Basin objective for TDS is further discussed in the Project Description for the CBP (Chapter 3).

Comment Letter #7 (OCWD): OCWD states that the EIR should discuss and quantify the change in the amount of imported water to Southern California during an average year and over the 25-year lifespan of the CBP that would result from its implementation.

Response: As stated in the Project Description under Subsection 3.5.1, over the 25 year program a total of 375,000 AF would be recharged and a commensurate amount would be extracted. This is the total amount of imported water that would be off-set by the CBP over the 25 year life of the project. IEUA has acknowledged in this DPEIR that the proposed CBP would result in a reduction in surplus flows to the Santa Ana River (SAR). While IEUA would continue to meet its baseflow obligations to the SAR, and is projected to exceed its baseflow obligations to the SAR even with the proposed diversions of recycled water from IEUA, WRCRWA, and Rialto, the proposed CBP would probably result in a reduction in surplus flows to the SAR. IEUA is aware that OCWD currently recharges essentially all baseflow of the SAR water discharged from the Prado Dam, and understands that it may also rely on the surplus flows that IEUA has contributed to the SAR in recent years. Given the above, the proposed CBP could have a potential to reduce surplus flows to the SAR, which OCWD may rely on as a contribution to its overall groundwater supply to meet its service area demand. OCWD has indicated that it may need to increase the volume of imported water purchased in order to replace any reduction in SAR baseflow. While IEUA's modeling of the CBP suggests that the CBP would not result in a violation of the baseflow obligation to the SAR (refer to Subchapter 4.11, Hydrology and Water Quality, and the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2 of this DPEIR), if OCWD has come to rely on surplus flows and would require imported water to supplement its supply as a result, the annual energy emissions that would be offset by precluding the need for imported SWP water by the CBP may be overestimated from a cumulative perspective.

Subchapter 4.2: Aesthetics
No comments specific to this topic were received.

Subchapter 4.3: Agriculture and Forestry Resources
No comments specific to this topic were received.

Subchapter 4.4: Air Quality
Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the environmental analysis utilize the following tools and resources to address the air quality environmental analysis: South Coast AQMD's CEQA Air Quality Handbook and website, CalEEMod land use emissions software, South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan, Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.

Response: These tools were consulted or utilized in drafting the technical appendices (Appendices 5 and 9 to Volume 2 of this DPEIR address Air Quality and Greenhouse Gas respectively) and in crafting the environmental analyses for the Air Quality and Greenhouse Gas (GHG) Subchapters (4.4 and 4.9).

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the IEUA quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds and LSTs to determine the project's air quality impacts.

Response: The emissions were calculated and compared against the significance thresholds referenced above. LSTs are discussed under Subsection 4.4.4.2, and under Subsection 4.4.5(c). Criteria pollutants and emissions thereof are discussed under Subsection 4.4.2.4, 4.4.4.1, and under Subsection 4.4.5(b).

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the IEUA should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project, including both construction and operational impacts, including overlapping construction and operational activities.

Response: All phases of the project and all pollutant sources related to the project during construction, operation, and any overlapping construction and operational activities are addressed under Subsection 4.4.5.

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the IEUA should, if the project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment.

Response: No health risk assessment has been performed as this project would not generate or attract diesel fueled vehicular trips. Toxic Air Contaminant Emissions are discussed under Subsection 4.4.5(b).

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that, in the event that the project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts.

Response: The proposed project would, without the implementation of mitigation, result in a significant construction emission impact. As such, mitigation is required and shall be implemented to ensure that project related nitrogen oxide (NO_x) impacts will be reduced below the SCAQMD's regional significance threshold. This is addressed under Subsection 4.4.5(b).

Subchapter 4.5: Biological Resources

Comment Letter #6 (CDFW): The comment letter provided by CDFW recommended that the EIR specifically include:

- An assessment of the various habitat types, and a map that identifies the location of each habitat type.

- A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected.
- A complete, recent inventory of rare, threatened, endangered, and other sensitive species within, as well as any offsite areas with the potential to be affected.

Response: Note that the proposed project is programmatic in nature, and most of the locations in which CBP facilities will be installed have not yet been identified. IEUA reviewed the various regional data bases and concluded that the Santa Ana River Habitat Conservation Plan Draft EIR (SAR HCP DEIR) contained the most current and expansive discussion of the habitat types, assessment of biological resources, and discussion of rare, threatened, endangered and sensitive species regarding the Upper Santa Ana River Watershed. This document was incorporated by reference on the whole, and specific sections with pertinent data are referenced and provided in the text of Subchapter 4.5 and provided in detail in Appendix 6. In addition, the General Biology report prepared in 2020 in conjunction with the Chino Basin Watermaster Optimum Basin Management Program Update (OBMPU) Draft EIR is also provided in Appendix 6 for additional regional information. Much of the data provided for the Santa Ana River Habitat Conservation Plan (SAR HCP) and HCP DEIR has been included in the Environmental Setting of Subchapter 4.5, under Subsection 4.5.2. A complete, recent inventory of rare, threatened, endangered, and other sensitive species can be found in this subsection, and this as well as a general biological inventory that is specific to the development at RP-4 can be found in Appendix 6, in the site-specific Biological Resources Assessment prepared for the proposed AWPF at RP-4. As individual sites for proposed CBP Infrastructure facilities are identified in the future comparable studies will be completed and provided to CDFW for review.

Comment Letter #6 (CDFW): CDFW recommends that the EIR utilize a hybrid approach to cumulative impacts, with a list of past, present, and probable future projects/activities being considered in combination with baseline conditions, projections, and adopted planning documents.

Response: The cumulative impact projections were made using regional planning documents and site-specific technical studies, and more specifically modeling that takes into account the existing and projected conditions within the Basin, with the proposed CBP being analyzed against these existing and projected conditions. Additionally, the cumulative impact evaluation in this DPEIR relies upon the cumulative evaluation of impacts forecast in the SAR HCP DEIR, and the Avoidance and Mitigation Measures (AMMS) identified to offset impacts that are forecast in the Upper SAR watershed. Cumulative impacts are discussed in each issue subchapter of Chapter 4 in this document, and are either located at the end of each subchapter, or at the end of each individual issue under each subchapter. Cumulatively considerable impacts from implementation of the CBP were identified for the topics of Biological Resources, Greenhouse Gas, and Utilities and Service Systems. As future sites are located and evaluated, potential impacts at these sites that may contribute to cumulative effects within the Upper SAR watershed will be evaluated on a case-by-case basis.

Specifically, as this recommendation applies to biological resources, the proposed CBP project operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordinances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as

least Bell's vireo as well as aquatic species such as the Santa Ana Sucker and Southern California arroyo chub. To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, the SAR HCP determined that potential impacts of water management agencies in the Upper Santa Ana River Watershed that cumulative impacts to covered species and supporting habitat can be mitigated by implementing the HCP, though cumulative impacts to the Santa Ana Sucker are anticipated to be cumulatively considerable. The SAR HCP DEIR concluded that such impacts should be treated as cumulatively considerable and unavoidably significant given the possibility that the effectiveness of some of the HCP mitigation measures cannot be guaranteed to be successful. As a contributor to this cumulative effect and a Permittee Agency, IEUA concurs with this finding and has identified it as a cumulatively considerable contribution to cumulative biological resource impacts in the area. This discussion can be found in Subchapter 4.5, specifically under Subsection 4.5.8.

Comment Letter #6 (CDFW): The CDFW comment letter states that the 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are "losing reaches" characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are "gaining reaches" characterized by groundwater discharge. CDFW again urges that this, along with other available data, be used to analyze the potential cumulative impacts of the Program.

Response: Please refer to the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2, as it addresses the impacts to the SAR baseflow by IEUA. Additionally, these issues are addressed in this DPEIR and in the HCP DEIR. Pertinent sections of the HCP DEIR are provided in Appendix 6 of the CBP DPEIR.

The CBP is not anticipated to result in the inability of IEUA or WMWD to meet the baseflow obligation, and is therefore not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin as the minimum annual flow of 34,000 AFY will continue to be available even with implementation of the CBP. As such, the habitat within Prado Basin is supported by surface water inflows, rising groundwater, and detention by the Prado Dam. Future flows have been cumulatively modified for Upper Santa Ana River and Prado Basin in the SAR HCP described above. IEUA is a Permittee Agency and is expected to be a participant in the future SAR HCP. IEUA's operational water diversions have a potential to contribute to a cumulative adverse impact on biological resources both in the Upper Santa Ana River channel and Prado Basin. Based on implementing avoidance and mitigation measures in accordance with the mitigation outlined in the SAR HCP DEIR (presented in Appendix 6), the impacts to 21 of the identified covered species can be reduced to a less than cumulatively considerable adverse impact or even beneficial impacts. However, according to the SAR HCP DEIR the cumulative operational diversions from the SAR may contribute to a significant adverse impact on the Santa Ana Sucker. As described above, this impact is not unequivocal; it is based on insufficient data to ensure that all of the proposed avoidance and mitigation measures are effective, particularly translocation, which "may not achieve their intended result." IEUA concurs with the preceding cumulative impact findings of the SAR HCP DEIR. This discussion can be found under Subsection 4.5.6 (1a) and 2(a), as well as under 4.5.7, which, in addition to the data provided in Appendix 6 containing the SAR HCP DEIR's environmental analysis, addresses mitigation that would reduce impacts from the CBP on biological resources to the greatest extent feasible.

Comment Letter #6 (CDFW): CDFW indicates that the EIR should identify mitigation measures and alternatives to avoid or minimize potential impacts to the extent feasible:

- The EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to any project or activity within the Program, or that may be impacted due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors.
- The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from direct and indirect impacts.
- California Species of Special Concern (CSSC) should be considered during the environmental review process.
- CDFW considers adverse impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for these adverse impacts.
- The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values.
- If sensitive species and/or their habitat may be impacted, CDFW recommends the inclusion of specific mitigation in the EIR.
- CDFW recommends that the EIR specify mitigation that is roughly proportional to the level of impacts.
- Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. CDFW outlines what the plans should entail.
- CDFW recommends that the EIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site.
- To avoid direct mortality, CDFW recommends that the lead agency condition the EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities.
- CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species
- CDFW therefore recommends that the EIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.

Response: Detailed mitigation measures are provided in Subchapter 4.5, and IEUA believes they conform with the content identified above. Please note that each future site will be evaluated by a professionally qualified biologist and the first decision by IEUA will be whether to relocate a particular facility (avoidance) to another site based on sensitivity of biological resources identified at the location.

Comment Letter #6 (CDFW): The comment letter supplied by CDFW indicates that CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (Public Resources Code § 21065). To facilitate issuance of an LSA Agreement, if necessary, the DPEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments.

*Response: Mitigation measure MM **BIO-3** requires the IEUA to obtain the appropriate regulatory permits, including an LSA Agreement, and also addresses the types of mitigation that would be provided to fully address potential impacts thereof. Furthermore, IEUA will focus on avoidance of disturbing stream channel or other wetland or riparian resources. Additionally, MM **BIO-4** requires jurisdictional water preconstruction surveys at all future selected CBP sites, and the results would be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values. These measures can be found under Subsection 4.5.7. At this time, the locations for most CBP facilities are unknown, and as such it would be speculative to identify site specific impacts to lake, stream, or riparian resources. Hence, MMs **BIO-3** and **BIO-4**, are required to ensure that any such impacts will be fully mitigated.*

Comment Letter #6 (CDFW): The CDFW comment letter recommends that, to ameliorate the water demands of this project, the lead agency should incorporate water-wise concepts in project landscape design plans.

*Response: This practice has been in place at IEUA facilities for many years and will continue to be incorporated in future CBP facility design. Furthermore, mitigation (MM **BIO-26**) is provided to accomplish this objective such that any landscaping required to support CBP facility sites will use water-wise or xeric landscaping.*

Comment Letter #6 (CDFW): The comment letter supplied by CDFW requests that any special status species and natural communities detected during Project surveys are submitted to the CNDDB.

Response: No special status species or natural communities were detected during project survey for RP-4; however, future site-specific biological resources assessments will be required to report their findings to the CNDDB.

Comment Letter #6 (CDFW): The CDFW comment letter notes the required filing fees.

Response: IEUA is aware of the filing fees and appreciates CDFW's reminder.

Comment Letter #7 (OCWD): The comment letter provided by OCWD recommends that, should the CBP result in the removal of specifically the 17,000 AFY baseflow obligation from the Santa Ana River Watershed, biological impacts could occur, and should therefore be sufficiently analyzed to determine whether there would be negative impacts to the Prado Basin riparian habitat. Mitigation should be addressed to ensure specific actions are taken to minimize negative consequences of the CBP.

Response: As stated under the above response to CDFW's comment letter, the Addendum to the Technical Memorandum prepared by West Yost, provided as Appendix 4 to Volume 2, addresses the CBP's impacts to the SAR baseflow. This Addendum indicates that the CBP is not anticipated to result in the inability of IEUA or WMWD to meet the baseflow obligation. As such, it is not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin as the minimum annual flow of 34,000 AFY will continue to be available even with implementation of the CBP.

As OCWD is aware, habitat within Prado Basin is supported by surface water inflows, rising groundwater, and detention by the Prado Dam. Future flows have been cumulatively modified for Upper Santa Ana River and Prado Basin in the SAR HCP. IEUA is a Permittee Agency and is

expected to be a participant in the future SAR HCP. IEUA's operational water diversions have a potential to contribute to a cumulative adverse impact on biological resources in both the Upper Santa Ana River channel and Prado Basin. Based on implementing avoidance and mitigation measures in accordance with the mitigation outlined in the SAR HCP DEIR (presented in Appendix 6), the impacts to 21 of the identified covered species can be reduced to a less than cumulatively considerable adverse impact or even beneficial impacts. However, according to the SAR HCP DEIR the cumulative operational diversions from the SAR may contribute to a significant adverse impact on the Santa Ana Sucker. As described above, this impact is not unequivocal; it is based on insufficient data to ensure that all of the proposed avoidance and mitigation measures are effective, particularly translocation, which "may not achieve their intended result." IEUA concurs with the preceding cumulative impact findings of the SAR HCP DEIR. This discussion can be found under Subsection 4.5.6 (1a) and 2(a), as well as under 4.5.7, which, in addition to the data provided in Appendix 6 containing the SAR HCP DEIR's environmental analysis, addresses mitigation that would reduce impacts from the CBP on biological resources to the greatest extent feasible.

Comment Letter #7 (OCWD): OCWD states that the EIR should analyze and quantify the biological benefit to Salmonids by accounting for the change in imported water needs of Southern California as a whole as a result of the CBP.

Response: Please refer to the discussion of cumulative impacts under Subsection 4.5.8 in the Biological Resources Subchapter (4.5). There would be a benefit to the Salmonids through improvement of habitat conditions likely during dry years. The pulse flows that would occur during "call years" would improve the survival of out-migrating salmon.

Subchapter 4.6: Cultural Resources

Comment Letter #2 (NAHC): The comment letter supplied by the NAHC recommends that the Cultural Resources Assessment be prepared in accordance with its standards.

Response: The Cultural Resources Assessment specific to the development at RP-4 has been prepared in accordance with the NAHC's recommended standards. This report is provided as Appendix 7 to Volume 2 of this DPEIR.

Comment Letter #2 (NAHC): The comment letter supplied by the NAHC recommends that they be contacted for a sacred lands file search and to procure a Native American Tribal Consultation List.

Response: This comment is noted, and IEUA will follow through with this requirement upon future site specific cultural resource investigations.

Comment Letter #2 (NAHC): The comment letter supplied by the NAHC indicates that lack of surface evidence does not preclude the existence of subsurface evidence and as such, IEUA should include mitigation that addresses the potential for inadvertent discovery, provisions for the deposition of cultural items, and include provisions for the treatment and disposition of native American human remains.

Response: Given that many of the locations for specific CBP facilities have not yet been identified, the Cultural Resources environmental analysis assumes that subsurface, as well as unknown aboveground historical, archaeological, paleontological, and tribal cultural resources may exist within future CBP project sites. Detailed mitigation has been provided to address the potential for

such resources to exist, and to address the treatment and disposition of such resources should they be discovered. These mitigation measures can be found under Subsection 4.6.6.

Subchapter 4.7: Energy
No comments specific to this topic were received.

Subchapter 4.8: Geology and Soils
No comments specific to this topic were received.

Subchapter 4.9: Greenhouse Gases (GHG)
Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the environmental analysis utilize the following tools and resources to address the GHG environmental analysis: South Coast AQMD's CEQA Air Quality Handbook and website, CalEEMod land use emissions software, South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan, Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy.

Response: These tools were consulted and/or utilized in drafting this DPEIR's technical appendices (Appendices 5 and 9 to Volume 2 of this DPEIR address Air Quality and Greenhouse Gas respectively) and in crafting the environmental analyses for the Air Quality and Greenhouse Gas (GHG) Subchapters (4.4 and 4.9).

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that the IEUA should identify any potential adverse air quality and greenhouse gas impacts that could occur from all phases of the project, including both construction and operational impacts, including overlapping construction and operational activities.

Response: All phases of the project, including construction, operation, and any overlapping construction and operational activities, are evaluated in terms of GHG emission potential under Subchapter 4.9, GHG; specifically, under Subsections 4.9.4 and 4.9.5.

Comment Letter #4 (SCAQMD): The comment letter supplied by SCAQMD recommends that, in the event that the project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts.

Response: The proposed project could, with or without the implementation of mitigation, result in significant construction and operations related GHG emissions. This is because, since IEUA does not know to what extent these measures will be sufficient to reduce either operational or construction related emissions below the SCAQMD threshold, it is not possible to ensure that this significant construction and operations-related impacts would be avoided. No feasible mitigation exists that would ensure the CBP's construction and operations are reduced below the identified SCAQMD thresholds. This is addressed under Subsection 4.9.5(a).

Comment Letter #7 (OCWD): OCWD states that the EIR should analyze and quantify the greenhouse gas emissions by accounting for the CBP's impact on Southern California's total imported water needs.

Response: The response to this comment can be found at Subsection 4.9.5(a), under the cumulative impact analysis. An excerpt has been provided as follows: While IEUA would continue to meet its baseflow obligations to the SAR, and is projected to exceed its baseflow obligations to the SAR even with the proposed diversions of recycled water from IEUA, WRCRWA, and Rialto, the proposed CBP would probably result in a reduction in surplus flows to the SAR. As such, though IEUA's modeling of the CBP suggests that the CBP would not result in a violation of the baseflow obligation to the SAR (refer to Subchapter 4.11, Hydrology and Water Quality, and the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2 of this DPEIR), if OCWD has come to rely on surplus flows and would require imported water to supplement its supply as a result, the annual energy emissions that would be offset by precluding the need for imported SWP water by the CBP may be overestimated from a cumulative perspective.

From a cumulative perspective, if the CBP would result in OCWD requiring an increase in imported water due to reduced surplus flows to the SAR, the cumulative energy demand would be increased commensurate with the amount of imported water OCWD would require from the SWP, thereby requiring energy to deliver an unknown amount of imported water to OCWD to supplement its supply. Nevertheless, as determined above, the CBP could contribute cumulatively considerable GHG emissions as a result of the CBP's electricity consumption itself, which may not be carbon-neutral by 2045, thereby potentially hindering the State's 2030 and long-term GHG emission reduction goals. It would be somewhat speculative to determine to what extent the increased use of imported water by OCWD would increase the CBP's cumulative contribution to GHG emissions; regardless, the CBP could contribute to a cumulatively considerable GHG impact that cannot be mitigated.

Subchapter 4.10: Hazards and Hazardous Materials
No comments specific to this topic were received.

Subchapter 4.11: Hydrology and Water Quality
Comment Letter #3 (San Bernardino County Department of Public Works): The comment letter from the San Bernardino County Department of Public Works relates to flood hazards that might result from the proposed CBP.

Response: The flood hazards are addressed at Subsection 4.11.5, under issues c(iv) and d. Mitigation is provided to ensure that impacts related to future CBP facilities located in flood hazard zones are fully addressed and reduced below significance thresholds.

Comment Letter #3 (San Bernardino County Department of Public Works): The comment letter from the San Bernardino County Department of Public Works relates to coordination with the USACOE within the Prado Dam Inundation Area.

Response: The risk associated with flood hazards is addressed at Subsection 4.11.5, under issues c(iv) and d. Mitigation that covers development in all 100-year floodplains within the CBP project area is provided to ensure that impacts related to future CBP facilities located in flood hazard zones are fully addressed and reduced below significance thresholds. No CBP projects are anticipated to be located within the Prado Dam Inundation Area specifically, and where any CBP facility, excepting those that are located at existing permitted facilities and pipelines and turnouts located belowground, must be located within either the Prado Dam Inundation Area specifically, or within a 100-year flood hazard, subsequent CEQA documentation would be

required. In such subsequent CEQA documentation, USAOCE coordination, where applicable, would be addressed.

Comment Letter #6 (CDFW): The comment letter from CDFW recommends that future climate or demographic changes that will affect the sustainable management of a groundwater basin, as well as environmental uses and the hydrologic links between surface and groundwater be incorporated.

Response: Through the use of the SAR HCP DEIR, the DPEIR's Subchapter 4.11 addresses the data regarding hydrologic links between surface and groundwater. The groundwater model utilized to analyze the impacts from the CBP on the Basin takes climate change into account and also takes into account the baseline conditions, which indirectly account for demographic changes in the area. Surface flows are discussed throughout this DPEIR, including in Subchapters 4.7 and 4.9 (Energy and Greenhouse Gas) as they relate to Santa Ana River (SAR) diversions and baseflows, as well as Subchapter 4.5, Biological Resources, and finally under Subchapter 4.11, as the impacts to the SAR have been fully addressed therein and within the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2.

As discussed in the DPEIR, the demographic changes are less important for this project because the vast majority of the proposed facilities will be located within existing urbanized areas, essentially between Interstate 10 and Interstate 210 (north/south) and the San Bernardino/Los Angeles County boundary and Sierra Avenue (east/west). If forecasts of future climate change are accepted, there will be greater amounts of precipitation in the project area in some years, but also a potential for more years of drought. As a member of the SAR HCP (permittee with covered activities) and a participant in the Chino Basin Watermaster's programs, IEUA is already committed to adaptive management to address both water management and the habitat supported by surface and groundwater within the Chino Basin and the Upper Santa Ana River watershed, including climate change.

Comment Letter #6 (CDFW): CDFW recommends that IEUA utilize the Basin Technical Advisory Committee (BTAC) findings and continue to collaborate to ensure groundwater and surface water impacts are adequately evaluated and considered.

Response: Through the use of the SAR HCP DEIR, the DPEIR's Subchapter 4.11 addresses the data regarding hydrologic links between surface and groundwater. These are found in this DPEIR and in the SAR HCP DEIR and the Technical Memoranda provided by West Yost. Pertinent sections of the SAR HCP DEIR are provided in Appendix 6 of the CBP DPEIR and in Appendix 4 of the DPEIR, respectively.

Subchapter 4.12: Land Use and Planning

Comment Letter #3 (San Bernardino County Department of Public Works): The comment letter from the San Bernardino County Department of Public Works indicates that any encroachments on the SBCFCD's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the SBCFCD prior to start of construction. The necessity for permits, and any impacts associated with them, should be addressed in the Project environmental documents prior to adoption and certification.

Response: The proposed CBP would be constructed within locations that have not yet been selected. As a result, it is not possible to indicate whether any SBCFCD encroachment permits

would be required in order to implement the proposed project. However, should the proposed project require encroachment within SBCFCD rights-of-way or facilities, IEUA shall coordinate with SBCFCD and obtain the appropriate permits and notify the SBCFCD upon selection of a location within SBCFCD rights-of-way or facilities.

Subchapter 4.13: Mineral Resources
No comments specific to this topic were received.

Subchapter 4.14: Noise
No comments specific to this topic were received.

Subchapter 4.15: Population and Housing
No comments specific to this topic were received.

Subchapter 4.16: Public Services
No comments specific to this topic were received.

Subchapter 4.17: Recreation
No comments specific to this topic were received.

Subchapter 4.18: Transportation and Traffic
No comments specific to this topic were received.

Subchapter 4.19: Tribal Cultural Resources
The comments received by the NAHC (comment letter #2), apply to Tribal Cultural Resources, in addition to Cultural Resources. Refer to the discussion above regarding the DPEIR's Subchapter 4.6: Cultural Resources, for responses to NAHC's comments.

Subchapter 4.20: Utilities and Service Systems
No comments specific to this topic were received.

Subchapter 4.21: Wildfire
No comments specific to this topic were received.

Chapter 5: Alternatives
Comment Letter #5 (Ontario): The comment letter supplied by the City of Ontario requests that a Local Control and Supply Alternative that evaluates only PUT components, with no TAKE components, be included as an alternative to the CBP.

Response: Mr. Burton's claim that "CEQA requires the alternatives to be evaluated at the same level of detail as the proposed project to comply with CEQA informational standards…" is incorrect. (See CEQA Guidelines section 15126.6(d) & (f).)

The Baseline Compliance Alternative, which has been extracted from the WSIP Feasibility Study Report, is comparable to the requested Local Control and Supply Alternative. This alternative includes no TAKE facilities, would make beneficial use of some recycled water that is currently discharged to the Santa Ana River, as the CBP would, while continuing to meet the Santa Ana River baseflow obligations, reduce reliance on imported water through the provision of a new AWPF with PUT facilities and no TAKE facilities, as this comment requests. The discussion of alternatives to the CBP is addressed in Chapter 5 of this DPEIR.

Comment Letter #6 (CDFW): The comment letter from CDFW recommends that the EIR address a reasonable range of alternatives, including the no project alternative, which should address climate change and drought that may affect the community.

Response: The DPEIR evaluates a reasonable range of alternatives, including the mandatory No Project Alternative plus two other alternatives, one that evaluates a Baseline Compliance Alternative (only developing PUT facilities, including a new AWPF comparable to the one proposed by the CBP), and another that evaluates a Regional Water Quality and Reliability Plan Alternative that includes a 15,000 AF Capacity AWPF, injection wells, purified water conveyance facilities, and brine conveyance, as well as extraction wells, groundwater treatment facilities, pipelines, and connections that are integrated with the AWPF and injection well system; no connections to MWD's water distribution system would be required. Furthermore, the analysis of the No Project Alternative identifies the potential for significant impacts to occur, including those related to climate change and drought. This analysis can be found under Subchapter 5.3, while the Baseline Compliance Alternative and Regional Water Quality and Reliability Plan Alternative can be found under Subchapters 5.4 and 5.5, respectively.

A copy of the Notice of Preparation and NOP Distribution list are provided in Subchapter 8.1 of this DPEIR. A copy of the referenced comment letters/comments is also provided in Subchapter 8.2 of this DPEIR.

The DPEIR was prepared in order to address all of the issues identified in the NOP as potentially significant and to provide information intended for use by IEUA, interested and responsible agencies and parties, and the general public in evaluating the potential environmental effects of implementing the proposed project.

CEQA requires that IEUA consider the environmental information in the project record, including this DPEIR, prior to making a decision on the proposed project. IEUA must consider and decide whether to recommend approval of the CBP as proposed and described in Chapter 3, Project Description of this DPEIR. IEUA also has the authority to recommend modifications to the project based on input provided during the public review process for the DPEIR.

As stated above, IEUA is the Lead Agency for the CBP pursuant to the CEQA Guidelines Section 15051(b)(1). The DPEIR was prepared by Tom Dodson & Associates (TDA), in conjunction with Rincon Consultants, Inc. (Rincon), under contract to IEUA. TDA and Rincon were retained to assist IEUA to perform the independent review of the project required by CEQA before the DPEIR is released. IEUA has reviewed the contents of this DPEIR and concurs in the conclusions and findings contained herein.

2.3 SCOPE AND CONTENT OF THIS EIR

As stated previously, this DPEIR evaluates the environmental effects of the proposed CBP based on Appendix G of the CEQA Guidelines as follows: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire.

Based on data and analysis provided in this DPEIR, it is concluded the proposed CBP could result in significant adverse environmental impacts to the following environmental issues: ***Biological***

Resources, Greenhouse Gas, and Utilities and Service Systems. All other potential impacts were determined to be less than significant without mitigation or can be reduced to a less than significant level with implementation of the mitigation measures identified in this DPEIR.

In addition to evaluating the environmental issues listed above, this DPEIR contains all of the sections mandated by CEQA and the CEQA Guidelines. **Table 2.3-1** provides a listing of the contents required in an EIR along with a reference to the chapter and page number where these issues can be reviewed in this document. This DPEIR consists of two volumes. Volume 1 contains the CEQA mandated sections and some pertinent appendices. Volume 2 contains the technical appendices.

Table 2.3-1
REQUIRED EIR CONTENTS

Required Section (per CEQA Guidelines)	Section in EIR	Page Number
Table of Contents (Section 15122)	Same	ii
Summary (Section 15123)	Chapter 1	1-1
Project Description (Section 15124)	Chapter 3	3-1
Environmental Setting (Section 15125)	Chapter 4	Beginning 4-1
Significant Environmental Effects of Proposed Project, i.e., Environmental Impacts (Section 15126(a))	Chapter 4	Beginning 4-1
Unavoidable Significant Environmental Effects (Section 15126(b))	Chapter 4	Beginning 4-1
Mitigation Measures (Section 15126(e))	Chapter 4	Beginning 4-1
Cumulative Impacts (Section 15130)	Chapter 4	Beginning 4-1 and 6-2
Alternatives to the Proposed Action (Section 15126(f))	Chapter 5	Beginning 5-1
Growth-Inducing Impacts (Section 15126(d))	Chapter 6	6-1
Irreversible Environmental Changes (Section 15126(c))	Chapter 6	6-1
Effects Found Not to be Significant (Section 15128)	Chapter 1	6-1
Organizations and Persons Consulted (Section 15129)	Chapter 7	7-1
Appendices	Chapter 8	8-1

2.4 DPEIR FORMAT AND ORGANIZATION

The CBP DPEIR contains eight chapters in Volume 1 and a set of technical appendices in Volume 2, which, when considered as a whole, provide the reviewer with an evaluation of the potential significant adverse environmental impacts from implementing the proposed CBP. The following paragraphs provide a summary of the content of each chapter of the DPEIR.

Chapter 1 contains the Executive Summary for the DPEIR. This includes an overview of the proposed project and a tabular summary of the potential adverse impacts and mitigation measures.

Chapter 2 provides the reviewer with an Introduction to the document. This chapter of the document describes the background of the proposed project, its purpose, and its organization. The CEQA process to date is summarized and the scope of the DPEIR is identified.

Chapter 3 contains the Project Description used to forecast environmental impacts. This chapter describes for the reviewer how the existing environment will be altered by the proposed project. Chapter 3 sets the stage for the environmental impact forecasts set out in the following chapter.

Chapter 4 presents environmental impact forecasts for each environmental issue identified in Section 2.3 of this DPEIR. Chapter 4 sets out for the reviewer an impact evaluation for each issue in the following manner: an introduction; the environmental setting; thresholds of significance; the potential impacts that may occur if the CBP is implemented; proposed mitigation measures; cumulative impacts; and significant and unavoidable impacts.

Chapter 5 contains the evaluation of range of alternatives to the proposed CBP. Included in this section is an analysis of the mandatory No Project Alternative plus two additional alternatives.

Chapter 6 presents the topical issues that are required in an EIR. These include any significant irreversible environmental changes and any growth inducing effects of the proposed CBP.

Chapter 7 describes the resources used in preparing this DPEIR, including persons and organizations contacted; list of preparers; and bibliography.

Chapter 8 contains those materials referenced as essential appendices to the DPEIR, such as the NOP. Technical Appendices are provided in Volume 2 of the DPEIR, under separate cover. Appendix materials are referenced at appropriate locations in the text of this DPEIR.

2.5 AVAILABILITY OF THE CHINO BASIN PROGRAM DPEIR

This DPEIR is being distributed directly to all public agencies and interested persons identified in the NOP mailing list (see Subchapter 8.1), the State Clearinghouse, as well as any other requesting agencies or individuals. All reviewers will be provided 45 days to review the DPEIR and submit comments to the IEUA for consideration and response. The DPEIR is also available for public review at IEUA's website at https://www.ieua.org/chino-basin-program-cega-documents/ and at the following locations during the 45-day review period:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

2.6 REVIEW PROCESS

After receiving comments on the DPEIR, IEUA will prepare a Final PEIR for certification prior to making a recommendation to the IEUA Board regarding approval of the CBP. Information concerning the Final PEIR public review schedule and IEUA meetings for this project can be obtained by contacting Ms. Sylvie Lee, P.E., IEUA. Questions and comments submitted by mail shall be addressed to:

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Attn: Ms. Sylvie Lee, P.E.
Phone: (909) 993-1600
Email: slee@ieua.org

Implementation of future individual project(s) in accordance with the CBP may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds. Consequently, it should not be considered exhaustive.

- Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Santa Ana Regional Water Quality Control Board (RWQCB) enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the RWQCB and county providing enforcement oversight.

- The project may include the potential discharge of fill into or alterations of "waters of the United States," "waters of the State," and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the RWQCB, and California Department of Fish and Wildlife (CDFW) over the life of the Chino Basin Watermaster Optimum Basin Management Program (OBMPU). A Section 404 permit for the discharge of fill material into "waters of the United States" may be required from the ACOE; a Section 401 Water Quality Certification may be required from the RWQCB; a Report of Waste Discharge may be required from the RWQCB; and a 1600 Streambed Alteration Agreement may be required from the CDFW.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.

- Land use permits may be required from local jurisdictions, such as individual cities and the two counties (Riverside and San Bernardino).

- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD).

- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), flood control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as BNSF Railway Company.

- The Chino Basin Watermaster has a separate approval process for the Storage and Recovery Application including material physical injury analysis and consistency with the court approved management agreements within the Chino Basin.

- State Water Resources Control Board will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or Division of Drinking Water. Additionally, water supply connection permits will be required from the SWRCB's DDW upon connecting an agency supply to a new source of supply.

This is considered to be a partial list of other permitting agencies for future CBP future individual projects.

CHAPTER 3 – PROJECT DESCRIPTION

All exhibits are located at the end of this chapter, not immediately following their reference in the text.

3.1 INTRODUCTION

This chapter contains a detailed description of the proposed project, the Chino Basin Program (CBP), with focus on those program characteristics and activities that have the potential to cause a direct physical change in the environment, or a reasonably foreseeable indirect physical change to the environment.

Inland Empire Utilities Agency (IEUA) and local partners have developed long-term plans to implement a variety of new infrastructure to meet future needs for wastewater treatment and potable water supplies, while increasing resiliency and sustainability of regional water resources management. Some of the facilities included in these plans are addressed in IEUA's ten-year forecast (TYF) and Integrated Water Resources Plan (IRP). The CBP provides an opportunity to implement critical long-term project components of these plans, addressing local, regional, and potentially statewide and federal water resources management issues. The CBP is a revolutionary, first-of-its-kind program designed to help the region move beyond traditional water management practices and into a new era of water use optimization. The CBP promotes proactive investment in managing the water quality of the Chino Groundwater Basin and in meeting regional water supply reliability needs in the face of climate change, while leveraging California's interregional plumbing system and the Chino Basin's future potential for water recycling to produce benefits to local, State, and federal interest.

3.1.1 IEUA Agency Background

IEUA, located in western San Bernardino County, serves approximately 875,000 residents in a 242-square mile service area. As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and Cucamonga Valley Water District (CVWD) in the city of Rancho Cucamonga. In addition to the contracting agencies, IEUA provides wholesale imported water from Metropolitan Water District of Southern California (MWD) to Water Facilities Authority (WFA), CVWD in the city of Rancho Cucamonga and Fontana Water Company (FWC) in the city of Fontana; Water Facilities Authority then serves imported water to the cities of Chino, Chino Hills, Ontario, Upland, and Monte Vista Water District in the City of Montclair and adjacent unincorporated areas (**Exhibit 1**).

IEUA is a regional sewage treatment and water agency that provides wastewater treatment, solids handling, and recycled water to the west end of San Bernardino County. Its 242-square-mile service area includes the cities of Upland, Montclair, Ontario, Fontana, Chino and Chino Hills, and CVWD, which services the City of Rancho Cucamonga and the unincorporated areas of San Bernardino County, including the Chino Agricultural Preserve. IEUA, a special assessment district, is governed by a five seat publicly elected Board of Directors. Each director is assigned to one of the five divisions which are: Division 1 - Upland/Montclair; Division 2 - Ontario/ Agricultural Preserve; Division 3 - Chino/ Chino Hills; Division 4 - Fontana; and Division 5 - Rancho Cucamonga. The Regional Technical and Policy Committees provide information on technical and policy issues, and there are representatives from each of the contracting agencies on these committees.

Exhibit 1: IEUA Service Area

Five regional water recycling plants are used to treat wastewater from IEUA's service area. They are: Regional Water Recycling Plant No. 1 (RP-1), located in the City of Ontario; Regional Water Recycling Plant No. 2 (RP-2), located in the City of Chino; Regional Water Recycling Plant No. 4 (RP-4), located in the City of Rancho Cucamonga; Carbon Canyon Water Recycling Facility (CCWRF), located in the City of Chino; and Regional Water Recycling Plant No. 5 (RP-5), located in the City of Chino. Of the five plants, RP-2 is the only plant that does not produce any recycled water. In conjunction with these facilities, IEUA maintains and operates a desalter facility, Chino I Desalter, in the City of Chino and a biosolids composting facility, Inland Empire Composting Facility, in the City of Rancho Cucamonga on behalf of the Chino Basin Desalter Authority and Inland Empire Regional Composting Authority, respectively (**Exhibit 2**). IEUA is also the MWD representative for the contracting agencies.

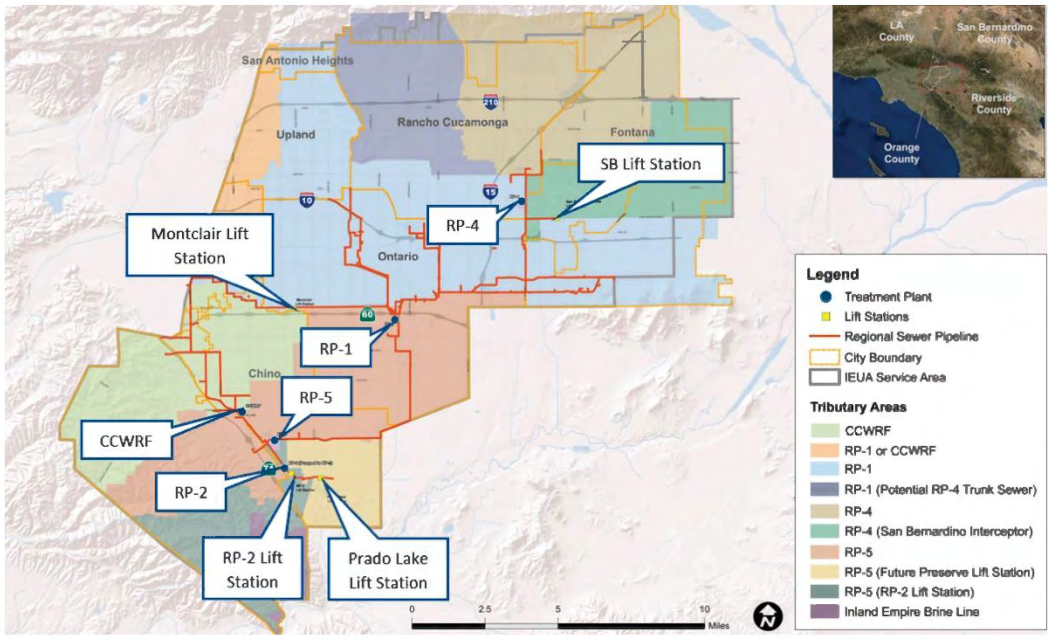

Exhibit 2: IEUA Facility Locations

The water resource inventory for the IEUA service area is made up of stormwater, recycled water, local surface water, groundwater, and imported water.

- Stormwater comes primarily from rain and snow starting in the San Gabriel Mountains and moving down through the Chino Basin watershed and diverted into groundwater recharge basins.
- Recycled water is generated from IEUA's four recycling plants.
- Local surface water is similar to stormwater, but the water is diverted and treated at a water treatment facility within the service area.
- Groundwater makes up the majority of the area's annual water supply and comes primarily from the Chino Basin and from basins adjacent to the Chino Basin. These basins include, Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins.
- Imported water is purchased from MWD.

Table 1 provides a recent summary of the raw water supply to the region, which is ultimately the source of supply for the recycled water processed at the IEUA water recycling facilities.

Table 1
WATER SUPPLY BY TYPE FOR IEUA SERVICE AREA

Water Supply	Percent of Total
Groundwater	30%
Desalter Product Water	15%
Imported Water (SWP)	25%
Stormwater and other local water supply	10%
Recycled Water	20%
Total	**100%**

Source: IEUA FY 2019-2020 Annual Water Use Report

3.2 PROJECT LOCATION

The Chino Basin consists of about 235-square-miles of the upper Santa Ana River watershed. The boundary of the Chino Basin is legally defined in the 1978 Judgment in the case of Chino Basin Municipal Water District vs. the City of Chino et al. The Chino Basin is an alluvial valley that is relatively flat from east to west and slopes from the north to the south at a one to two percent grade. Valley elevation ranges from about 2,000 feet in the foothills to approximately 500 feet near Prado Dam. As shown in **Figure 1**, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The Chino Basin is one of the largest groundwater basins in Southern California with about 5,000,000 acre-feet (AF) of groundwater and an unused storage capacity of approximately 1,000,000 acre-feet. Cities and other water supply entities produce groundwater for all or part of their municipal and industrial supplies; and about 300 to 400 agricultural users continue to produce groundwater from the Basin. The Chino Basin is an integral part of the regional and

statewide water supply system. Prior to 1978, the Basin was in an overdraft condition. After 1978, the Basin has been operated as described in the 1978 Judgment.[1]

The principal drainage course of the Chino Basin is the Santa Ana River, which flows 69-miles across the Santa Ana Watershed from its origin in the San Bernardino Mountains to the Pacific Ocean. The Santa Ana River enters the Basin at the Riverside Narrows and flows along the southern boundary to the Prado Flood Control Reservoir where it is eventually discharged through the outlet at Prado Dam into Orange County. Chino Basin is traversed by a series of ephemeral and perennial streams that include: Chino Creek, San Antonio Creek, Cucamonga Creek, Deer Creek, Day Creek, Etiwanda Creek and San Sevaine Creek.

These creeks carry significant flows only during, and for a short time after, storm events that typically occur from November through March. Year-round flow occurs along the entire reach of the Santa Ana River due to year-round surface inflows at Riverside Narrows, discharges from municipal water recycling plants to the River between the Narrows and Prado Dam, and rising groundwater. Rising groundwater occurs in Chino Creek, in the Santa Ana River at Prado Dam, and potentially other locations on the Santa Ana River depending on climate and season.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W.

3.3 EXISTING CONDITIONS OF THE BASIN

3.3.1 Chino Groundwater Basin

The proposed CBP envisions an increase the Safe Storage Capacity of the Chino Groundwater Basin (Chino Basin). As such, the following is a discussion of the background, existing circumstances of the Chino Basin and storage capacity thereof.

On January 2, 1975, several Chino Basin groundwater producers filed suit in the State of California Superior Court for San Bernardino County (Court) to settle the problem of allocating water rights in the Chino Basin. On January 27, 1978, the Court entered a judgment in “Chino Basin Municipal Water District v. City of Chino et. al.” (Judgment). The Judgment adjudicated the groundwater rights of the Chino Basin, established the Chino Basin Watermaster (CBWM or Watermaster)—a Court created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin. **Figure 2** shows the adjudicated boundary as it is legally defined in the Judgment, the hydrologic boundary, the Chino Basin management zones, and the groundwater management zones defined by the Santa Ana Regional Water Quality Control Board (Regional Board) in the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan).

Watermaster is governed by a nine-member board drawn from parties from three groups: an Appropriative Pool, a Non-Agricultural Pool, and an Agricultural Pool, and three other public

[1] Original judgment in Chino Basin Municipal Water District vs. City of Chino, et al., signed by Judge Howard B. Weiner, Case No. 164327. File transferred August 1989, by order of the Court and assigned new case number RCV51010. The restated Judgment can be found here: http://www.cbwm.org/docs/WatermasterCourtFilings/2012%20Watermaster%20Restated%20Judgment.pdf

agencies, including IEUA, which effectively represent the water producers and wholesalers in the Chino Basin. These member agencies are considered “stakeholders” or “the Parties.”

To manage the Chino Basin for the long-term benefit of all producers in the area, the Optimum Basin Management Program (OBMP) was developed pursuant to a Judgment entered in the Superior Court of the State of California on January 27, 1978 (the Court) and compelled by further order of the Court under its continuing jurisdiction. The Watermaster administers the decree under the direction of the Court. It was granted discretionary powers to develop and implement the OBMP.

When the OBMP was developed it was expected that the Parties and other entities would use the storage space above 5,300,000 AF for conjunctive use and not exceed a storage volume of 5,800,000 AF. The Operational Storage Requirement—the storage or volume in the Chino Basin that is necessary to maintain safe yield—was estimated to be 5,300,000 AF in the OBMP. The OBMP also defined the term Safe Storage, which is an estimate of the maximum storage in the Basin that will not cause significant water-quality and high-groundwater related problems. Safe Storage was estimated to be about 5,800,000 AF in the 2000 OBMP. The Safe Storage Capacity, which is the difference between the Safe Storage (5,800,000 AF) and the Operational Storage Requirement (5,300,000 AF), was determined to be 500,000 AF in the 2000 OBMP. Water occupying the Safe Storage Capacity includes water in storage accounts (stored water), carryover water, and water that was anticipated to be stored in future groundwater Storage and Recovery Programs.

If groundwater storage exceeded 5,800,000 AF, the OBMP assumed that mitigation would be required to operate the Basin at those higher levels of storage. In the years since the 2000 OBMP was adopted, however, twenty years of additional hydrologic information, implementation experience of the OBMP through the Peace and Peace II Agreements, and related actions of the Watermaster and the Parties, have demonstrated that Safe Storage is greater than 5,800,000 AF and, although not precisely computed, the implied Safe Storage Capacity is 735,000 AF or larger.

In 2016, Watermaster identified the need to update the OBMP so that the storage management plan in the OBMP Implementation Plan could be modified to reflect an increase in managed storage accounts, which were projected to exceed the Safe Storage Capacity (SSC) limit of 500,000 AF defined in the 2000 OBMP. In 2017, IEUA adopted Addendum No. 1 to the OBMP PEIR to provide a “temporary increase in the Safe Storage Capacity from 500,000 AF to 600,000 AF for the period of July 1, 2017 through June 30, 2021 […] until a comprehensive re-evaluation of the Safe Storage Capacity value/concept can be completed before June 30, 2021.”[2] Addendum No. 1 was supported with engineering work that demonstrated that this temporary increase in SSC would not cause material physical injury (MPI) to Watermaster stakeholders or loss of Hydraulic Control.[3] Addendum No. 1 was certified by IEUA in March 2017, and Safe Storage Capacity was reset to 600,000 AF through June 30, 2021.

[2] Tom Dodson & Associates. (2017). Addendum No. 1 to the Optimum Basin Management Program Project. Page 2.
[3] MPI means material injury that is attributable to the recharge, transfer, storage and recovery, management, movement or production of water, or implementation of the OBMP, including, but not limited to, degradation of water quality, liquefaction, land subsidence, increases in pump lift (lower water levels), and adverse impacts associated with rising groundwater. MPI does not include “economic injury” that results from other than physical causes. Once fully mitigated, physical injury shall not be considered to be material. (From Peace Agreement Definitions, page 8) Further, loss of Hydraulic Control means the inability to eliminate groundwater discharge from the Chino-North Groundwater Management Zone to the Santa Ana River or its reduction to less than 1,000 AFY.

Watermaster began the comprehensive re-evaluation of the Safe Storage Capacity concept through a stakeholder process during 2017 and 2018, which resulted in the 2018 Storage Framework Investigation Report (SFI). The SFI evaluated the Basin response, MPI and undesirable results from projections of the Parties' future storage management activities and potential future Storage and Recovery Programs that could store additional water in the Basin, concurrently with the Parties (cumulatively up to 1,000,000 AF). This work was based, in part, on groundwater modeling projections of the Basin using the 2017 Watermaster model that was last previously calibrated in 2011. The SFI developed a series of metrics to identify MPI and undesirable results for the use of storage space and introduced a new term called managed storage. Managed storage includes water stored by the Parties and other entities, which fluctuates over time based on the actions of the Parties and other entities.

During the period between 2018 and mid-2020, Watermaster revised its groundwater model and renamed it the 2020 Chino Valley Model (CVM). The 2020 CVM supersedes the model version used in the 2018 SFI. The CVM was used to update pumping and recharge projections to develop an updated estimate of Safe Yield for the period 2021 through 2030 (WEI, 2020). Based on this Safe Yield Investigation, Safe Yield for the period was determined to be 131,100 acre-feet per year.[4] The Court subsequently accepted Watermaster's Safe Yield recommendation and ordered the Safe Yield changed in July 2020.

In late 2020, Watermaster identified the need to amend the OBMP so that the Safe Storage Capacity of the Chino Basin could be increased to address what Watermaster deemed a "Local Storage Limit Solution" (LSLS).[5] As such, Watermaster and IEUA authorized the preparation of Addendum No. 2 in order to enable a study of the current Safe Storage Capacity. Watermaster facilitated the preparation of a report based on the CVM regarding the use of Chino Basin storage space to update the Safe Storage Capacity based on updated water use and Safe Yield projections.

Based on the report's projection of managed storage, the LSLS was defined by the use of storage space up to 700,000 AF through June 30, 2030, decreasing to 620,000 AF from July 1, 2030 through June 30, 2035. This definition of the LSLS balanced the need to provide for the combined use of managed storage by the Parties and the Dry Year Yield Program (DYYP)[6] through the end of the DYYP contract period (2028) and the Parties' need to hedge against future uncertainty by maximizing projected use of managed storage in the early 2030s. The increase in Safe Storage Capacity did not require the development of any new facilities or any other mitigation to minimize potential adverse impacts to the Basin, as none were projected to occur within the confines of the reset Safe Storage Capacity limits. Over time, cumulative use of the Basin for storage utilizing existing facilities at the same general existing rate of use can fully utilize managed storage space up to 700,000 AF through June 30, 2030, decreasing to 620,000 AF from July 1, 2030 through June 30, 2035. Addendum No. 2 was certified by IEUA in March 2021, and Safe Storage Capacity

[4] As defined by the Judgment, Safe Yield means the long-term average annual quantity of ground water (excluding replenishment or stored water but including return flow to the Basin from use of replenishment or stored water) which can be produced from the Basin under cultural conditions of a particular year without causing an undesirable result.
[5] The intent of the Local Storage Limit Solution was to address the need for greater storage in the Basin to accommodate the Parties desire for greater managed storage in the Basin, whilst taking into account the Metropolitan Dry-Year Yield Program (DYYP).
[6] The DYYP can store up to 100,000 AF with maximum puts of 25,000 AFY and maximum takes of 33,000 AFY. The DYYP Storage and Recovery agreement provides that puts and takes can exceed these values if agreed to by Watermaster (as was done in fiscal years 2018 and 2009, respectively). The agreement that authorizes the DYYP will expire in 2028.

was reset to 700,000 AF through June 30, 2030, decreasing to 620,000 AF from July 1, 2030 through June 30, 2035.

3.3.2 Water Supply

Formed in 1950, IEUA is a member of the MWD and thus acts as a supplemental water provider. Approximately 25 percent of the water used in the region is imported from MWD through the State Water Project (SWP). Due to water quality limitations (salinity, total dissolved solids [TDS]) and operation of the regional recycled water program, IEUA only takes water from the SWP. IEUA strives to increase regional sustainability through the development of reliable local water supplies. These efforts include using water more efficiently, eliminating waste and unreasonable use, and making the region climate resilient through maximizing the use of recycled water. IEUA has invested in water use efficiency efforts and is on track to reduce water use.

A diverse portfolio of water supply sources has been developed within IEUA's service area. The region relies on groundwater from the Chino Basin and other basins (Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins), local surface water from creeks originating in the San Gabriel Mountains, recycled water produced locally, and imported water from the SWP via MWD. The IEUA IRP established a baseline water supply scenario for IEUA's service area through 2040. **Table 2** below provides the current and projected recycled water supplies in acre-feet per year (AFY) through 2040.

Table 2
CURRENT AND PROJECTED RECYCLED WATER SUPPLIES (AFY)

Recycled Water Supply	2020	2025	2030	2035	2040
	56,388[1]	60,150	63,530	64,500	67,140
NOTES: (1) For 2020, this amount is the actual supply. For 2025 to 2040, supply projections are from IEUA 2021 Wastewater and Recycled Water Demand Forecasts based on land use					

3.3.3 Water Demand

Current and projected recycled water demands through 2040 are provided in **Table 3** below. Recycled water demands include direct use and groundwater recharge. IEUA recycled water that is not beneficially used is discharged to the Santa Ana River as wastewater treatment plant effluent.

Table 3
CURRENT AND PROJECTED RECYCLED WATER DEMAND (AFY)

	2020	2025	2030	2035	2040
Direct Use Demands[2]	17,115	20,870	23,275	24,704	27,855
Groundwater Recharge[3]	13,381	14,962	16,420	16,420	16,420
Total	30,495	35,832	39,965	41,124	44,275
NOTES: (1) From IEUA 2021 Wastewater and Recycled Water Demand Forecasts, (2) From CBWM 2020 Storage Management Plan					

3.3.4 Water Quality

As one of the stewards responsible for managing water and wastewater in the region, IEUA continuously evaluates challenges and develops solutions to address them, all with the goal of securing a reliable/resilient, high-quality water supply in a cost-effective manner. This goal involves the use of various water sources, including imported water, stormwater, groundwater, and recycled water.

Recycled water is an increasingly essential asset to the region particularly with the uncertain future of imported water supplies due to climate change and environmental factors. Recycled water is the region's most climate resilient water supply because the amount of water available is not affected by dry years. Today, recycled water makes up approximately 15 percent of IEUA's water supply portfolio and hundreds of millions of dollars have been invested into the regional recycled water program.

The Regional Board's Basin Plan sets regulatory limitations for recycled water TDS and continued use of recycled water within the region depends on compliance with these limits. Increasing TDS levels in recycled water have been exacerbated by climate change, conservation and episodic periods of drought over the last twenty years. In 2015, there was a period where every month was setting a record-high recycled water TDS concentration. As a result, recycled water TDS approached the maximum effluent limit for recycled water (550 mg/L) in 2015, prompting an internal evaluation that was prepared in 2016. As demonstrated in **Exhibit 3**, recycled water TDS concentration over time shows a pattern of peaks and valleys, with a gradual increase over time. The 2016 preliminary evaluation demonstrated that TDS concentrations in water and wastewater supplies, and therefore recycled water, are steadily increasing, and drought conditions and water conserving activities exacerbate TDS concentrations in both (**Exhibit 4**). Based on this evaluation, IEUA concluded that implementation of an advanced water purification facility (AWPF) will be needed at some point to address increasing salinity. Furthermore, postponing treatment poses risks to maintaining the region's maximum benefit objectives associated with the Basin Plan, and consequently IEUA's compliance for its wastewater treatment operations. Maximum benefit objectives are defined in the paragraphs below. IEUA and the Watermaster raised these concerns to the RWQCB, who requested modeling and analysis to investigate the salinity challenge and explore alternative TDS compliance metrics that are protective of beneficial uses and that could be incorporated into the Basin Plan and subsequently IEUA and Watermaster permits.

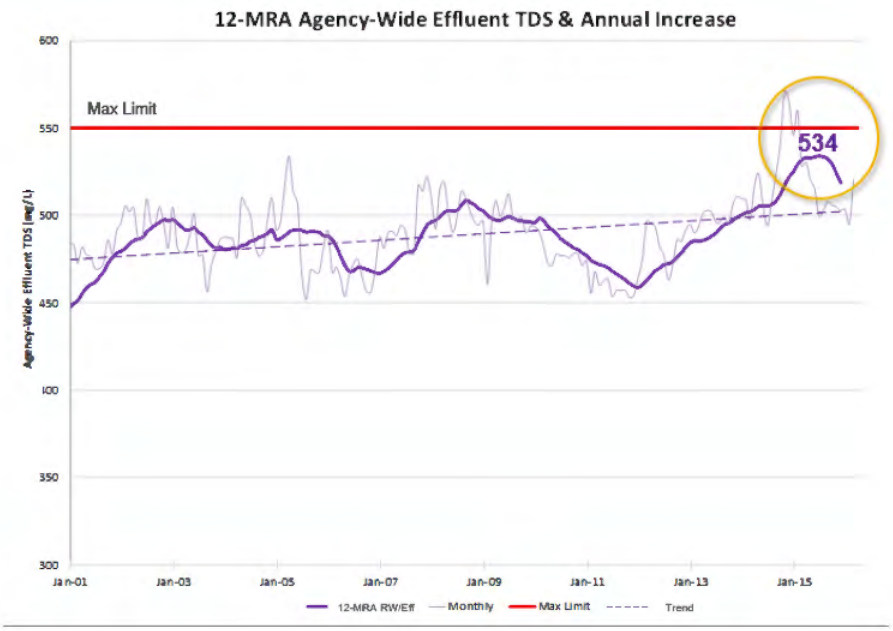

Exhibit 3: Agency-wide Recycled Water Effluent TDS Concentration (2001–2016)

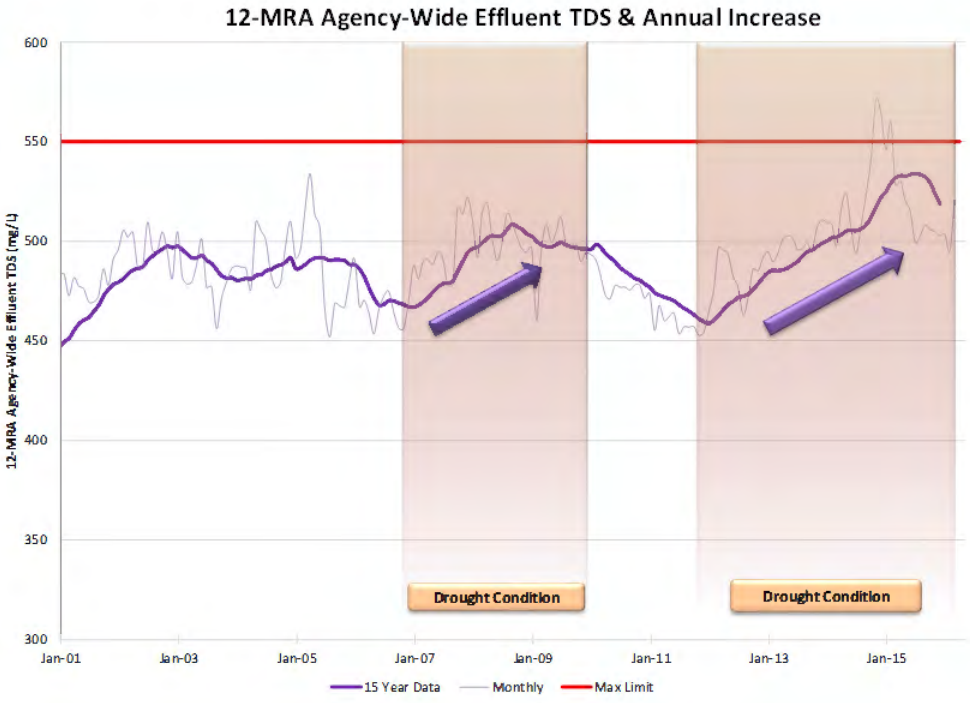

Exhibit 4: Drought & Recycled Water Effluent TDS Relationship

Subsequent to the 2016 Preliminary Evaluation, further analyses were completed in support of regional planning efforts. The primary objective for these analyses was to project when the recycled water TDS concentration would exceed the permit limit, as well as another RWQCB compliance-driven action limit (545 mg/L), which is in place to ensure TDS concentrations remain

below the permit limit of 550 mg/L. It is important to note that the analyses did not include the effects of climate change, and it is likely that the time for recycled water to reach the permit limits is shorter than the projections described below. The analyses demonstrated increasing trends in TDS concentrations for the water supply and recycled water. Based on the analysis, exceedance of the RWQCB action limit of 545 mg/L was projected to occur in 2031. Exceedance of the permit limit of 550 mg/L was projected to occur as early as 2030, up to 2034.

Maintaining permit compliance is a critical priority for IEUA and Chino Basin stakeholders. There are strict consequences associated with non-compliance with the Basin Plan that could lead to recycled water and groundwater recharge program interruption and/or retroactive activities. If the NPDES permit limit is exceeded, IEUA will be in violation of its NPDES permit, and if a plan to address it is not submitted to the RWQCB in a timely manner, this could result in the halting of all use of recycled water to recharge the groundwater aquifer. Consequently, all effluent from IEUA's water recycling facilities will need to be discharged to the Santa Ana River. Discharge to the Santa Ana River above 550 mg/L will also be above the discharge limitation, which is also 550 mg/L. Additionally, according to the Basin Plan, if the maximum benefit commitments (including the 550 mg/L limit) are not met, "the Regional Board will require that Watermaster and IEUA mitigate the effects of discharges of recycled and imported water that took place under the maximum benefit objectives." This will require AWPFs to mitigate the effects of the recycled water and groundwater recharge programs that have operated above the more stringent antidegradation objectives since the 2004 Basin Plan amendment was adopted. The Basin Plan also states that "The Regional Board will also require mitigation of any adverse effects on water quality downstream of the Chino Basin that result from failure to implement the 'maximum benefit' commitments." Non-compliance could result in permit modification with more stringent recycled water and groundwater recharge limits, severely impacting both the operability of the programs as well as the costs.

In addition to the challenges associated with TDS, IEUA is also facing regulatory challenges with 1,2,3-Trichloropropane (1,2,3-TCP), perfluorooctanoic acid (PFOA), microplastics, and other contaminants of emerging concern (CEC). These contaminants are making their way into IEUA's recycling plants, which are not designed for their removal. In 2019, recycled water used for groundwater recharge exceeded the 1,2,3-TCP maximum contaminant level and PFOA Notification Level. It becomes evident, then, that even if advanced treatment is not needed for TDS compliance, it may be needed to address other regulatory challenges related to CECs within the region to continue to have access to existing supplies.

3.3.5 Recycled Water Program

IEUA has produced and distributed high quality recycled water since 1972 when the Agency expanded its services to include regional wastewater treatment. Currently, IEUA owns and operates four regional recycled water plants that produce disinfected and filtered tertiary treated recycled water in compliance with California's Title 22 regulations. As previously discussed, these four regional recycled water plants include RP-1, RP-4, RP-5, and the CCWRF. Recycled water from these plants is used within the region for direct use (irrigation, industrial, and construction purposes) and groundwater recharge.

Water recycling is a critical component of the water resources management strategy for IEUA and the Chino Basin. The State of California has determined that the reuse of highly treated recycled water is the only new major source of water available to meet Southern California's growing water demand. IEUA currently receives over 50 million gallons per day of wastewater from its regional treatment plants. This water is treated to Title 22 regulations set forth by the State Division of

Drinking Water and is then distributed throughout the service area. As noted above, IEUA delivers the recycled water to be used for direct reuse and for groundwater recharge.

Direct Reuse

Within the region, recycled water is reused for a variety of applications including landscape irrigation, agricultural irrigation, industrial process water and construction. Recycled water demands by use type for fiscal year (FY) 2019/2020 are provided in **Table 4**: Recycled Water Demand for Direct Use by Use Type for FY 2019/2020.

Table 4
RECYCLED WATER DEMAND FOR DIRECT USE BY USE TYPE FOR FY 2019/2020

Type of Use	Demand (acre-feet)	Percentage
Recharge	13,381	44%
Agriculture	5,757	19%
Landscape	9,716	32%
Industrial	1,004	3%
Construction	638	4%
Total	**30,495**	**100%**

Notes: From IEUA 2019/2020 Recycled Water Annual Report

IEUA is the wholesale recycled water provider to its member agencies, which in turn are retail agencies that directly serve their customers. IEUA member agencies which served recycled water in FY 2019/2020 include:

- City of Chino
- City of Chino Hills
- CVWD
- Fontana (through FWC)
- Montclair (through MVWD)
- City of Ontario
- City of Upland

MVWD and FWC are the water retailers in the Cities of Montclair and Fontana, respectively, and obtain recycled water from their overlying cities. San Bernardino County is currently a direct use customer of IEUA based on long standing historical contracts since 1972. **Table 5**: Recycled Water Demand for Direct Use by Agency for FY 2019/2020 shows the recycled water demand for direct use by agency.

Table 5
RECYCLED WATER DEMAND FOR DIRECT USE BY AGENCY FOR FY 19/20

Retail Agency	Direct Use (AF)	Recharge (AF)	Demand (AF)
City of Chino	4,795	0	4,765
City of Chino Hills	1,417	1,188	2,605
CVWD	1,038	4,458	5,496
Fontana/FWC	211	2,693	2,904
Montclair/MVWD	298	781	1,079
City of Ontario	7,817	3,017	10,864
City of Upland	703	1,243	1,946
IEUA	773	0	773
San Bernardino County	65	0	65
Total	**17,115**	**13,381**	**30,495**

Notes: From IEUA 2019-20 Recycled Water Annual Report

3.3.6 Groundwater Recharge

IEUA, the Watermaster, the Chino Basin Water Conservation District, and the San Bernardino County Flood Control District jointly sponsor the Chino Basin recycled water groundwater recharge program that is an integral part of the OBMP and the region's water supply portfolio. This program was put in place to enhance water supply reliability and to improve drinking water quality throughout the greater Chino Basin. Annually, IEUA recharges on average between 30,000 and 40,000 AF of imported water, stormwater, and recycled water. The recharge infrastructure consists of a network of pipelines that direct stormwater run-off, imported water from the SWP, and IEUA recycled water to 16 recharge sites most of which consist of multiple recharge basins. These recharge basins provide capacity to recharge up to approximately 77,500 AFY.[7]

The Chino Basin recycled water groundwater recharge program assists in mitigating future water shortages in California caused by future limitations for importing water supplies from the SWP and provides a subsurface reserve of groundwater for local use. This enhances the current reliability of local groundwater supplies for a rapidly growing population and is an integral part of local water supply planning. The groundwater recharge program is an important part of the overall Chino Groundwater Basin program and serves as a long-term solution to the water supply and water quality issues facing the greater Chino Basin.

In fiscal year 2019/2020, 13,381 acre-feet of recycled water was used for groundwater recharge. This accounts for 41 percent of the total recycled water demand within the region. Recycled water demand for groundwater recharge by agency is provided in **Table 6**: Recycled Water Demand for Groundwater Recharge by Agency for FY 2019/2020.

Table 6
RECYCLED WATER DEMAND FOR RECHARGE BY AGENCY FOR FY 19/20

Type of Use	Demand (acre-feet)
City of Chino	0
City of Chino Hills	1,188
CVWD	4,458
Fontana/FWC	2,693
Montclair/MVWD	781
City of Ontario	3,017
City of Upland	1,243
IEUA	0
San Bernardino County	0
Total	**13,381**

Notes: From IEUA 2019/2020 Recycled Water Annual Report

3.4 PROJECT PURPOSE AND OBJECTIVES

It is the goal of the CBP to enhance both the SWP and the Central Valley Project for the betterment of operations, environment, resilience, and reliability. The CBP will be developed to provide flexibility to regional and local water operations, particularly during future extended droughts

[7] *Annual Finding of Substantial Compliance with the Recharge Master Plan* for FY 2020-21, which can be found at page 69 of the November 2020 Watermaster Board Package here

expected as climate change continues to impact California. New injection and extraction facilities, conveyance facilities, and water system interconnections will allow more optimal management of local water supplies, including improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement needs. The CBP will also develop new Southern California advanced water treatment supplies to be stored in the Chino Groundwater Basin and exchanged in dry and critical years for Southern California-bound SWP supplies stored in Northern California. The stored Northern California water will subsequently be released as multi-day pulse flows to support anadromous fish populations in the Feather River and the Sacramento-San Joaquin Delta (Delta), providing a statewide public benefit. The term for this exchange will be fixed at 25 years for a total volume of 375,000 acre-feet, after which time the CBP will be devoted to meeting local water management needs while fulfilling commitments to improve water quality in the Chino Groundwater Basin and provide a source of emergency water supply.

The CBP would strengthen partnerships among local agencies that participate in the project and offer an opportunity for local agencies to coalesce around the future of the Chino Basin. Partnerships between local agencies, the MWD, the California Department of Water Resources (DWR), the California Department of Fish and Wildlife (CDFW), and the U.S. Bureau of Reclamation (USBR) will also be essential to the success of the project and offer a framework for future improved collaboration. The program objectives are designed to guide the development and implementation of the CBP to reflect the collective interests of this partnership. These are to:

- Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin.
- Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin.
- Develop Infrastructure That Addresses Long Term Supply Vulnerabilities.
- Provide a Source of Water for Emergency Response.
- Develop an Integrated Solution to Produce State and Federal Environmental Benefits.

3.5 PROJECT SUMMARY

3.5.1 Chino Basin Program Overview

The CBP was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded $206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 AFY of recycled water in the Chino Basin and extract the water during call years, which will likely be in dry seasons.

The proposed CBP is uniquely designed to deliver public benefits including a highly reliable, dedicated environmental water supply to benefit Bay Delta instream flows, as well as enhance water supply reliability and improve water quality for water users in Southern California. Among the key attributes of the CBP is the production of a new source of highly reliable water supply for the environment. The challenges of allocating scarce water supplies among water users and the environment faced by State and federal agencies during California's recent historical drought clearly demonstrated the value of creating dependable new supplies for all California water users. Consistent with Governor Newsom's Water Resilience Portfolio Initiative, responsible public water agencies across California are adding resiliency to meet their future water needs by diversifying their water management portfolios through investment in a variety of water use efficiency and supplemental local supply programs and projects. The CBP offers an important opportunity to

similarly diversify the tools available to California's environmental managers for sustaining our State's vital aquatic ecosystems.

By increasing additional available groundwater supplies in the adjudicated Chino Groundwater Basin through increased water recycling and storage, and then dedicating a like amount of water for environmental flow purposes, the CBP provides a compelling example of a conjunctive use storage project operating at both ends of the SWP. The reliability of the water designated for groundwater storage is based upon the development of new water supplies from treated wastewater secured from IEUA partner agencies. In the scope of this program, new water is secured, transported, treated, and then deposited in the Chino Groundwater Basin for ecological benefit in the Bay-Delta watershed while providing water supply reliability and improved water quality benefits to IEUA customers and partner agencies.

The CBP will provide for an exchange of new water supplies in the Chino Basin for SWP supplies in Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits (**Exhibit 5**).

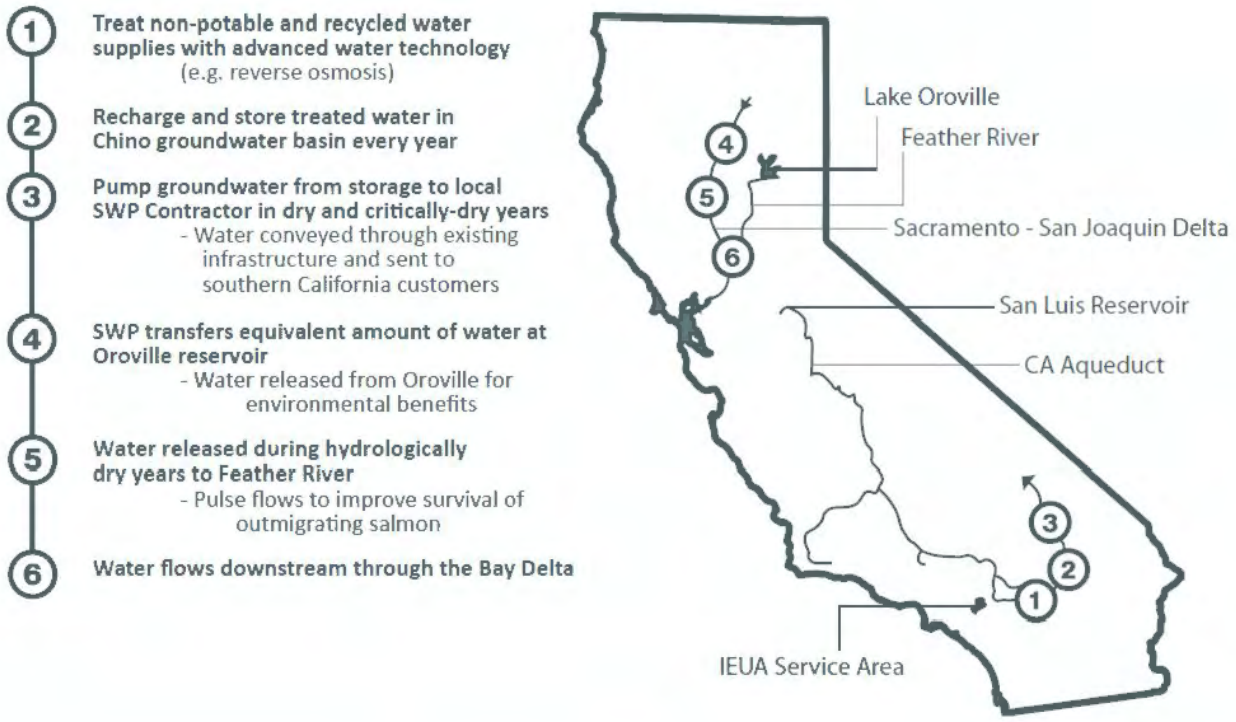

Exhibit 5: Overview of CBP Operations

The Feather River is the principal tributary of the Sacramento River, in the Sacramento Valley of Northern California. The river's main stem is about 73-miles long. Its length to its most distant headwater tributary is just over 210-miles. The lower Feather River begins in Lake Oroville, where its 4-mile-long tributary forks join together — the South Fork, Middle Fork, North Fork, and West Branch Feather Rivers. These and other tributaries drain part of the northern Sierra Nevada, and the extreme southern Cascades, as well as a small portion of the Sacramento Valley. The total drainage Basin is about 6,200-square-miles, with approximately 3,604-square-miles above Lake Oroville.

Since 1967, the Feather River's origin at the confluence of its four forks has been submerged under the waters of Lake Oroville, created by the construction of Oroville Dam in 1967. The construction of Oroville Dam created a fish passage barrier which stopped all anadromous fish, such as salmon, from migrating further upstream. At about 770 feet high, it is the tallest dam in the United States and wields nearly complete control over the flow of the Feather River by creating one of the largest reservoirs in California. The dam is the principal feature for the California SWP, storing water for more than 23 million people and 750,000 acres of farmland in Central and Southern California.

Directly downstream from Oroville Dam lies the Oroville-Thermalito Complex, which consists of two reservoirs, a Forebay and Afterbay, both used for hydroelectricity generation, although the water diverted from the Feather River for this purpose is returned to the river. Flow in the Feather River between the point of diversion and the Thermalito Outlet is commonly referred to as the Low Flow Channel. Flow in the Feather River below the Thermalito Afterbay is referred to as the High Flow Channel (**Exhibit 6**).

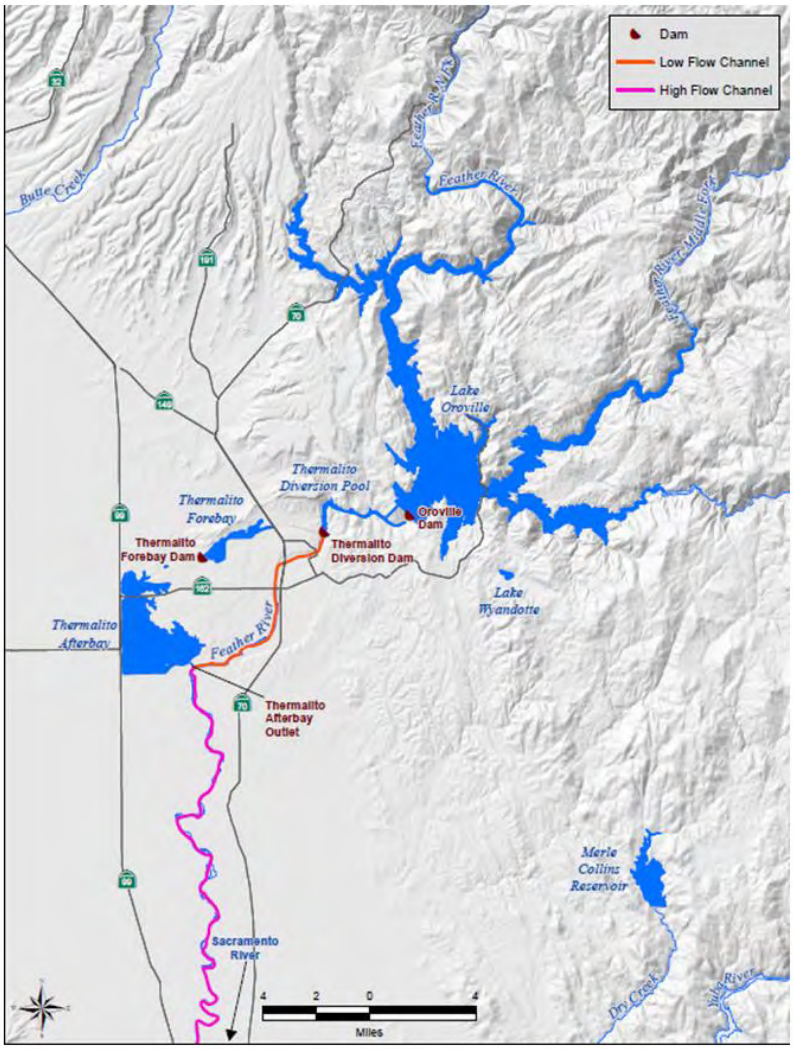

Exhibit 6: Overview of the Lower Feather River where CBP Pulse Flows would be Delivered

15,000 AFY of new water supply would be produced for a period of 25-years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in dry and critical years when pulse flows in the Feather River would provide the most ecosystem benefit. The exchange would be administered through agreements with the California Department of Water Resources (DWR), the California Department of Fish and Wildlife, the Metropolitan Water District of Southern California (MWD), and other project partners, the Basin would be operated in a way which dedicates blocks of water of up to 50,000 AFY towards ecosystem benefits north of the Delta. Additionally, new water stored in the Chino Basin will also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic events that disrupt imported water infrastructure. The infrastructure included in the CBP is consistent with infrastructure identified to reduce recycled water salinity for regulatory compliance as well as water infrastructure that has been identified through IEUA's Integrated Water Resources Plan (IRP) effort.

The program would rely on water transfer agreements through MWD. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD (referred to as in lieu). MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. It is also envisioned that the CBP would include both storage capacity and borrowing capacity in the Chino Basin as approved by the Chino Basin Watermaster (CBWM or Watermaster). The borrowing capacity would be used to help deliver multiple consecutive, dedicated blocks of water for ecosystem benefits. This water would be borrowed from previously stored groundwater, outside of this program, and replaced over time. Through this approach, the CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years of the 25-year program (375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., 375,000 AF would be recharged over 25 years and the same amount would be extracted over 25 years.

The CBP includes two main categories of facilities: PUT and TAKE components. The PUT and TAKE components are summarized in **Table 7**. The annual PUT (the components to recharge purified water to the Chino Basin) and periodic TAKE cycles (the components to extract groundwater and convey potable water supply) are shown graphically in **Exhibit 7**. Note that each CBP scenario consists of PUT and TAKE options that vary based on the CBP scenario under consideration.

Table 7
SUMMARY OF PUT AND TAKE COMPONENTS

PUT Components	TAKE Components
• Tertiary recycled water supply and conveyance • Advanced water purification facility (AWPF) • Purified water pumping and conveyance • Groundwater recharge (injection wells and/or recharge basins)	• Groundwater extraction and treatment • Potable water pumping and conveyance • Potable water usage (MWD pump back or in-lieu)
The CBP will comprise both PUT and TAKE components.	

Ultimately, the CBP brings together these components cost-effectively and greatly enhances flexibility to regional and local water operations, particularly during future extended droughts expected as climate change continues to impact California. The CBP's proposed AWPF, new injection and extraction facilities, conveyance facilities, and water system interconnections will allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure. The CBP will utilize advanced treated water for groundwater recharge, helping to ensure water quality objectives are met and local groundwater supply is sustainable.

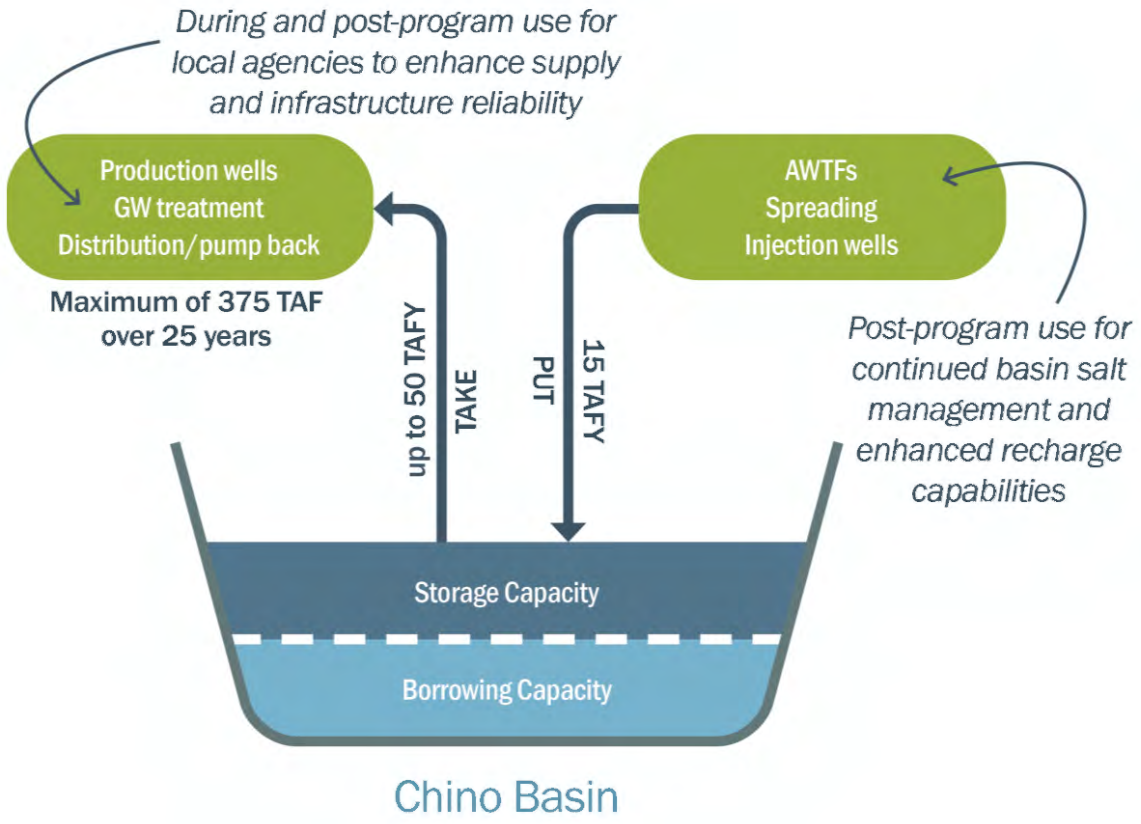

Exhibit 7: CBP PUT and TAKE Overview

3.5.2 Groundwater Storage Within the Chino Basin

The CBP will provide up to an increase in baseline storage capacity in the Chino Groundwater Basin to be used for deposit of up to 15,000 AF of advanced treated water in each year for 25-years. As previously discussed, this water will be accessible for withdrawal at a maximum capacity of 50,000 AF per year, for up to three consecutive years, when an ecosystem need arises. Through this approach, and depending on existing groundwater conditions, the CBP will be able to provide advanced treated water through increased storage capacity in the Chino Groundwater Basin, which enhances operational flexibility.

As stated under Subsection 3.3.1, Chino Basin Groundwater, the proposed CBP requires an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate an addition of up to 150,000 AF of managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035). As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as Watermaster stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter. The storage increase would accommodate the CBP during its 25-year planning horizon, and any future required increase in storage that may be necessary to accommodate the increased recharge and extraction capacities provided by CBP infrastructure would be addressed in future CEQA documentation. Overall, the CBP may: reduce dependence on imported water through development of infrastructure that would provide a new local source of water; improve water quality by reducing the expected TDS concentration of the AWPF effluent to 100 mg/L; and providing a new local water supply for the Basin as a result of the creation of the AWPF that would enable IEUA to continue to treat recycled water below the Regional Board's Basin Plan regulatory limits for continued Basin use. This proposed tiered increase would supersede the Safe Storage Capacity that was approved in March of 2021 by the IEUA Board and subsequently approved by the CBWM in May 2021. Furthermore, as storage space in the Basin is regulated by Watermaster, a Storage Agreement will be required in order for this proposed Safe Storage Capacity to be adopted.

3.5.3 Upper Santa Ana River Discharges

IEUA and Western Municipal Water District (WMWD) are responsible for an average annual flow of 42,000 AFY at Prado. However, when their cumulative credits exceed 30,000 AFY (which they currently do and will continue to do so for the foreseeable future), they are responsible for a minimum annual base flow of 34,000 AFY. Historically IEUA and WMWD have released a total of approximately 58,000 AFY to the Santa Ana River.

As part of meeting the CBP water demands, IEUA critically examined the potential sources of recycled water that might be available in the Upper Santa Ana River Watershed to support the water demand requirements of the proposed CBP AWPF, which is identified as 17,000 acre-feet per year (AFY). Of the 17,000 AFY that would be processed by the AWPF, 15,000 AFY of advanced treated water will be recharged to the Chino Basin annually and an estimated 2,000 AFY will be transported as reject water (brine) that will need to be disposed of through the Non-Reclaimable Waste System (NRWS). To meet this CBP demand, IEUA proposes to acquire an estimated 3,500 acre-feet (AF) of reclaimed water from the Rialto Wastewater Treatment Plant (WWTP) and 2,400 AFY of reclaimed water from the Western Riverside County Regional Wastewater Authority (WRCRWA) annually over the life of the CBP. The remainder of the recycled water deliveries to the AWPF will come from IEUA recycled water sources. The transfer of surface water will reduce the current flows into the Santa Ana River and Prado Basin. These transfers are analyzed and included in the Upper Santa Ana River Habitat Conservation Plan and Upper Santa Ana River Habitat Conservation Plan Environmental Impact Report. Furthermore, West Yost prepared an Addendum to their Technical Memorandum for the CBP (provided as Appendix 4 to Volume 2 of this DPEIR), which indicates that IEUA would continue to meet their baseflow obligations to the Santa Ana River, and is projected to continue to exceed their baseflow obligations to the SAR even with the proposed diversions of recycled water from IEUA, WRCRWA, and Rialto in support of the CBP AWPF; however, the proposed CBP would probably result in a reduction in surplus flows to the SAR.

3.6 REGIONAL CONTEXT AND PLANNING EFFORTS THAT INFORM THE CBP

The CBP combines various projects that will allow the region to meet the needs identified in the regional planning efforts conducted by IEUA in conjunction with its member agencies. These regional planning efforts enable IEUA to better prepare for the region's future water needs. Each planning report is backed by technical studies and supporting documentation to ensure regional planning efforts are well informed. Through these planning documents IEUA has identified future needs that the agency must meet in order to continue its track record of providing reliable, clean, and sustainable water to the region.

While each planning report is unique, there are shared themes including:

- The need to diversify water supplies and reduce dependency on imported water
- The anticipated negative impacts of climate change on water reliability
- An increasing need for advanced water treatment
- Furthering the beneficial use of water to restore natural populations and habitats

These themes have been intentionally addressed by components of the CBP. The CBP provides an opportunity to implement projects that address critical needs on a more expedited schedule, providing benefits earlier not only for the local agencies, but for CBP partners across the State.

Provided in Appendix 1, Draft Chino Basin Program Assumptions Technical Memorandum No. 1, under Section 2: Related Studies and Activities, is the complete list of regional planning documents that support the implementation of the CBP. The reviewer interested in details regarding CBP background information can review these documents for additional information.

3.7 REGULATORY REQUIREMENTS

Scenarios developed for the CBP were screened for viability in the context of regulatory compliance. Key regulatory requirements are set forth by the California State Water Resources Control Board (SWRCB), Division of Drinking Water (DDW) and the Regional Water Quality Control Board (RWQCB), Santa Ana Region, which have the following responsibilities:

- SWRCB DDW
    - Administers California's Drinking Water and Recycled Water Programs;
    - Establishes criteria to protect public health regarding recycled water production and use;
    - Develops Water Recycling Criteria in the California Code of Regulations (CCR), Title 22, which includes regulations for non-potable and potable use projects; and,
    - Participates in public hearings and makes recommendations for recycled water permits issued by the RWQCBs.

- RWQCB, Santa Ana Region
    - Establishes and oversees surface water and groundwater quality objectives to protect designated beneficial uses of waters in the region;
    - Issues and enforces water recycling and waste discharge permits and requirements; and,
    - Incorporates Title 22 requirements and recommendations from the SWRCB DDW into permits for water recycling and groundwater recharge projects.

Data provided in Appendix 1 (TM1) details the specific regulatory requirements that will govern the various aspects of the CBP. Since the program will include both groundwater replenishment and potable water production, the applicable regulations include:

- IEUA's existing water recycling and recharge permits
- Groundwater replenishment regulations; and,
- Drinking water regulations

The CBP program scenarios were developed to comply with these broad regulatory requirements. Additionally, a description of future direct potable reuse (DPR) regulations is discussed in Subsection 3.4.

While the CBP does not specifically include DPR concepts at this time, the program could be expanded to include DPR in the future. The CBP concept is based on indirect potable reuse (IPR) that relies on the ability to use the Chino Basin as a water resource storage Basin. A DPR concept could expand upon the advanced water purification concepts developed for the CBP with additional treatment/buffers and mix the water with a raw imported water source prior to water treatment, such as the Rialto Pipeline or upstream of CVWD's Lloyd. W. Michael WTP.

The main difference between IPR projects and DPR projects is the presence of an environmental buffer. An IPR project features an aquifer or reservoir that provides measurable and significant public health benefits. Lacking such an environmental buffer, a DPR project can utilize enhanced reliability from mechanical systems and treatment plant performance to replace the environmental buffer benefits and maintain an equivalent level of public health protection.

3.8 CHINO BASIN PROGRAM SPECIFICS

3.8.1 The Chino Basin Program

In August 2017, IEUA submitted a California Proposition 1 Water Storage Investment Program (WSIP) application for the CBP. In July 2018, the California Water Commission (CWC) approved maximum conditional funding for the proposal in the amount of $206.9 million. In return for this funding, the CBP will provide water supplies for public benefits as defined by WSIP, including ecosystem improvement, water quality improvement, and emergency response benefits.

The CBP will consist of AWPF, injection wells, extraction wells, groundwater treatment facilities, and a pipeline distribution network connecting the facilities to local agencies and MWD for a water exchange with the SWP. The CBP would introduce extraction wells, groundwater treatment facilities, pipelines, and interconnections to the MWD system, Rialto Pipeline. In addition, the CBP includes a combination of unused IEUA recycled water and external supplies imported to the IEUA service area as 17,000 AFY of new supply. As a result of implementation of the CBP, 2,000 AFY of water will be lost through the AWPF process each year.

The infrastructure details were evaluated based on the objectives discussed above. The preferred infrastructure design that best met the objectives defines the CBP and are shown in **Exhibit 8**. This system would collectively treat and store up to 15,000 AFY of recycled water in the Chino Basin each year, creating a new local water supply. However, the CBP also provides for an exchange of new water supplies in the Chino Basin for SWP supplies in Lake Oroville in Northern California that would otherwise be delivered to Southern California. Beginning in 2017, IEUA consulted with The Nature Conservancy and other environmental interest groups to develop an innovative project that could advance the Agency's long-range water resource plans and provide

significant public benefits to both the State of California and federal interests. The concept of creating a new water supply to use in a water exchange that would allow for a "block of water" to be dedicated to ecosystem improvements in the Feather River (a significant tributary within the Bay-Delta watershed of Northern California) in dry and critical water years was identified as a high priority with significant public benefits.

The lower Feather River provides habitat for a variety of native resident and anadromous fish including spring-run Chinook salmon (*Oncorhynchus tshawytscha*) which is listed as threatened under the California and federal Endangered Species Acts, and fall-run Chinook salmon that support recreational and commercial fisheries. Low instream flows, increased water temperatures, and decreased water quality during dry and critical water years poses a significant threat to the survival of juvenile salmonid species and increased straying of returning adults in California's Central Valley.

The exchange will encompass a capacity to use this new local water supply to support an exchange of 50,000 AFY "call" for water in dry and critical years, for up to three consecutive years, that would be delivered from Lake Oroville to be used to enhance instream flows in the Feather River, providing ecosystem benefits during an extended dry period. Releases of this magnitude equate to an increase of instream flows in the low flow channel of the Feather River by 2,500 cubic feet per second (cfs) per day (baseflow is approximately 800 cfs). These releases would be designed to improve the survival rate of migrating juvenile spring-run Chinook salmon. The proposed ecosystem benefit also pledges to work with resource agencies to alter the location of spring-run Chinook smolt releases to a point further upstream. This would increase natal imprinting which in turn decreases adult stray rates upon return.

While the releases will target spring-run Chinook salmon other federally listed species would also benefit. Specifically, pulse releases would provide migratory cues for steelhead (*O. mykiss*), increase forage opportunities for rearing steelhead and green sturgeon (*Acipenser medirostris*), increase access to floodplain habitat, and decrease predation by nonnative species. These benefits are specifically identified in federal planning documents as priority recovery actions to improve habitat and survival rates for these federally listed species.

This exchange element will be in operation during the first 25-years, administered through agreements with DWR, CDFW, MWD, and other project partners. The total delivery commitment is 375,000 AF at the end of the 25-year period. Afterwards, this water will be available for local use, therefore reducing dependence on imported water, improving water quality, and providing a new local water supply for the Basin.

In addition to the unique ecosystem improvement benefits provided by this dedicated water supply, the production of high-quality water in the Chino Basin will also deliver public benefits in the form of enhanced water quality and in the form of local water supply benefits available annually to offset the cost of imported water from MWD or banked for later extraction during dry and critical years when MWD supplies are curtailed due to reduced SWP allocations after the State performance period of 25-years. The CBP also provides local emergency supply benefits during the life of the project, including the first 25-years, for when planned or unplanned service disruptions occur, and provides potential land subsidence mitigation through operational efficiencies using recharged supplies to better manage groundwater pumping in areas sensitive to subsidence.

MWD is a vital partner in implementing the CBP. MWD is a SWP Water Supply Contract holder and would serve as a fundamental party in completing proposed water exchange between supplies stored locally in the Chino Groundwater Basin and SWP supplies stored in Lake Oroville. A principle for MWD participation is that no adverse impacts should occur to MWD, its member agencies, or other SWP contractors due to CBP operations. Because real time extraction capacity from the Chino Groundwater Basin will be limited in comparison to SWP delivery capability to MWD, some reoperation of the MWD distribution system will be necessary. Operations plans will be developed to minimize the potential for reoperations. These plans include the ability for IEUA and local partners to access stored water in the Chino Groundwater Basin in lieu of planned water deliveries from MWD. In addition, the CBP would have the ability to extract stored water, treat it to meet all water quality requirements (the means of treatment are discussed under Subsection 3.9.3, below) and pump it into MWD's water distribution system. This direct delivery will utilize new interconnection infrastructure. These new water conveyance and water system interconnections also provide an important alternative source of water supply to IEUA and its member agencies during any required shutdown of MWD's major pipelines delivering water to the region, such as the Rialto Pipeline, which is planned for rehabilitation as part of a larger rehabilitation plan of MWD's pipelines within their service area.

DWR's SWP infrastructure provides the basis for the Feather River Ecosystem Water Exchange proposed by the CBP. Water supplies for Feather River Pulse flows would be released by DWR, under terms of agreements with CDFW, MWD, and others from Lake Oroville. Similar to MWD's participation conditions, a principle for the CBP operations is that no adverse impacts should occur to the SWP or SWP Water Supply Contract holders. Operations plans will be developed to minimize the potential for SWP reoperations that result in adverse impacts to other SWP purposes, including water deliveries to SWP water supply contract holders. IEUA is working with DWR as they conduct SWP operations analyses to identify potential impacts and develop operational parameters to avoid them. Preliminary operations analysis indicates that reoperations required to achieve the exchange could be successfully completed under most hydrologically dry conditions. IEUA and DWR are developing metrics and conditions that will govern reoperations during an exchange and prevent potential water supply impacts to the SWP and its contractors. Should it be determined that pulse flow exchanges in certain critical year conditions are problematic for SWP and Oroville operations, CDFW has expressed willingness to consider avoiding exchanges under those unique conditions and instead carry out exchanges in years classified as dry or below normal years.

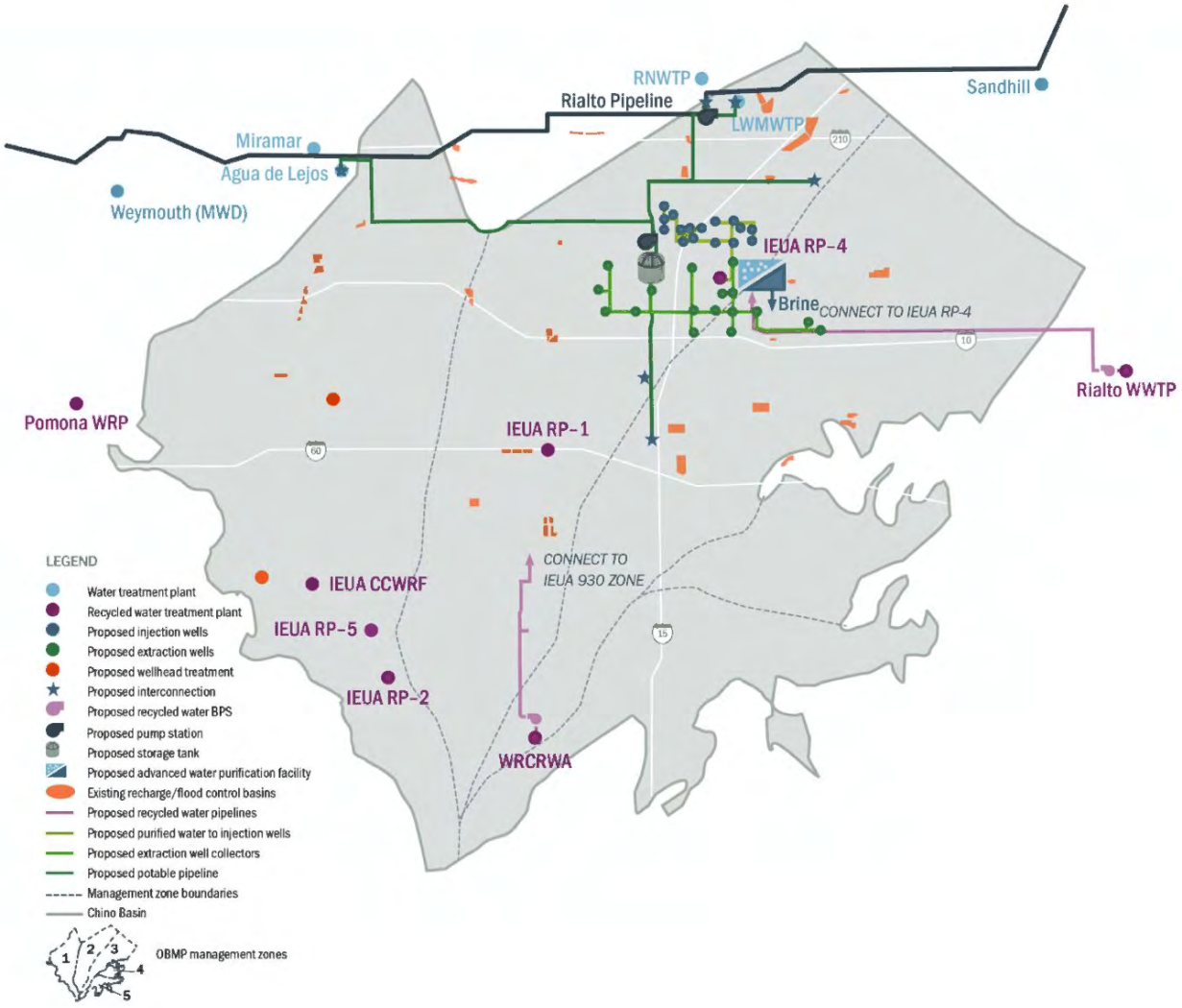

Exhibit 8: Conceptual CBP Infrastructure

Conclusion

The CBP includes water quality infrastructure, including advanced water treatment and groundwater injection facilities that would collectively treat and recharge/store up to 15,000 AFY of recycled water in the Chino Basin. The CBP would introduce water supply infrastructure, including extraction wells, groundwater treatment facilities, pipelines, and connections that are integrated with the AWPF and injection well system, as well as 17,000 AFY of recycled water, which includes unused recycled water and 6,000 AFY of external supplies.

The CBP would also include a regional pipeline connecting CBP potable water facilities to the region, as well as connections to the MWD with the ability to pump CBP potable supplies into MWD's water distribution system. As previously discussed, this connection would allow the CBP to make 50,000 AFY available to MWD in dry or critical year in exchange for the same amount of supply delivered by the SWP. In return, 50,000 AFY that would otherwise have been exported to MWD would be stored in Lake Oroville and used to enhance instream flows in the Feather River.

A summary of the infrastructure for the CBP is provided below in **Table 8**.

Table 8
SUMMARY OF CBP INFRASTRUCTURE

Project Category	Infrastructure
Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)	16 injection wells (maximum) 17 extraction wells (maximum) 4 monitoring wells (maximum) Use of existing wells including a mix of up to 4 of the following: • Use of existing Rialto Pipeline • Use of existing member agency wells • Use of existing Agua de Lejos WTP Clearwell • Use of existing Lloyd Michael WTP Clearwell
Project Category 2: Conveyance Facilities and Ancillary Facilities	Pipeline: The CBP would ultimately install a total of about 30 miles or 158,400 lineal feet (LF) of various types of pipeline. Potential alignments include a mix of the following: • TAKE 1: 9 miles of 12- to 36-inch collector pipelines • TAKE 1: 5 miles of 54-inch potable northern pipeline • TAKE 3: 9 miles of 12- to 42-inch collector pipelines • TAKE 3: 8 miles of 16- through 48-in potable northern pipeline • TAKE 3: 4 miles of 12- through 24-inch potable southern pipeline • TAKE 3: In lieu Brine Disposal IEBL 6,800 ft 8" pipeline, possible jack and bore across 300 ft under Hwy 71 and Chino Creek • TAKE 7: 7 miles of 36- to 72-inch e/w WFA pipeline • TAKE 7: 4.5 miles 24-inch e/w FWC pipeline • TAKE 7: 4.5 miles 54- to 72-inch & 36-inch CVWD/MWD pipeline • TAKE 7: 0.3 miles 54- to 72-inch MWD pipeline • TAKE 8: 6.3 miles of 48-inch CVWD pipeline • TAKE 8: 7 miles of 24-inch FWC-1 pipeline • TAKE 8: 0.7 miles of 24-inch FWC-2 pipeline • TAKE 8: 0.8 miles of 24-inch MWD pipeline • TAKE 8: 36-inch JCSD 2 miles • PUT 5: 7.1 miles of 8- to 30-inch pipeline for purified water conveyance • PUT 5: 1,400 ft (8' pipeline) NRWS brine conveyance; NRWS Capacity Units required 2,603 Reservoir: The CBP would install a circular, prestressed tank storage tank with a maximum capacity of 5 MG with possible and in-conduit hydropower facility. Pump Station: The CBP would install 4 pump stations serving various PUT and TAKE facilities. One pump station would serve PUT facilities, while up to three pump stations would support TAKE facilities. The breakdown of the types of pump stations include a mix of the following: • PUT 5: Pump station at RP-4 1,500 HP • TAKE 1: Pump Station with a max 9,300 HP, and a max of 31,100 gpm, 823 ft TDH • TAKE 3: Potable Water Pump Station #1: 7,000 HP, 23,300 gpm firm capacity, 823 ft TDH • TAKE 7: WFA Booster at 1,700 HP • TAKE 7: FWC Booster at 300 HP • TAKE 7: CVWD/MWD Booster at 4,800 HP • TAKE 8: Booster Station #1 at 5,300 HP • TAKE 8: MWD Booster at 650 HP Turnouts: The CBP would install a maximum of 6 turn-outs that would be between 12" and 72" in size to support TAKE facilities at various member agency locations throughout the Chino Basin
Project Category 3: Groundwater Storage Increase	The CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as Watermaster

Project Category	Infrastructure
	stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.
Project Category 4: Advanced Water Purification Facility and Other Water Treatment Facilities	AWPF: The CBP would install an AWPF at RP-4, which will ultimately have a capacity 15,000 AFY. The intake of recycled water at this facility will total 17,000 AFY, with a resulting 15,000 AFY of purified water derived from the AWPF processes. Wellhead Treatment: The CBP may install up to 3 wellhead treatment facilities at locations that have yet to be selected.

How the CBP Meets Objectives
The CBP also helps address local and state/federal objectives as follows:

- **Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin:** The project provides groundwater recharge facilities to recharge high quality recycled water, thus reducing TDS levels within the Chino Groundwater Basin.
- **Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin:** With the implementation of AWPF with an expected effluent concentration of 100 mg/L, the recycled water TDS will be significantly reduced.
- **Develop Infrastructure That Addresses Long Term Supply Vulnerabilities:** The CBP would improve the use of recycled water at a regional level through new regional pipelines enabling greater potential access to recycled water and enhances local groundwater supplies through the installation of additional extraction wells and through the installation of new wellhead treatment systems that would bring existing out-of-service wells online.
- **Provide a Source of Water for Emergency Response:** The project results in 15,000 AFY in local supplies which can be used to augment the water supply portfolio during unplanned or catastrophic events.
- **Develop an Integrated Solution to Produce State and Federal Environmental Benefits:** The project develops a highly reliable new water supply formally dedicated to environmental benefit that can be deployed dynamically and managed flexibly to address varying and changing ecological needs.

3.9 CHINO BASIN PROGRAM PUT FACILITIES

The CBP includes two main categories of facilities: PUT, the components to recharge purified water to the Chino Basin, and TAKE, the components to extract groundwater and convey potable water supply.

The PUT components are as follows:

- **Tertiary recycled water supply** of 17,000 AFY to produce 15,000 AFY of purified water.
- **Tertiary recycled water conveyance** to supply additional tertiary recycled water to IEUA's recycled water distribution system and the AWPF(s).
- **Advanced water purification** to treat the tertiary recycled water and produce purified water suitable for groundwater recharge through subsurface application.
- **Purified water pumping and conveyance** to convey water from the AWPF(s) to the injection wells for groundwater recharge.
- **Groundwater recharge using injection wells**

To support the development of the PUT and TAKE options, and program scenarios, WEI completed initial groundwater modeling for the PUT and TAKE components as shown below in Subsection 3.9.1.

3.9.1 Initial Groundwater Modeling

During development of the PUT and TAKE options it was determined that modeling would be beneficial to help guide the development of the CBP scenarios, which each contain a set of PUT and TAKE options. Wildermuth Environmental, Inc. (WEI, now known as West Yost) completed six interim groundwater modeling scenarios for the PUT and TAKE options to determine if these operational concepts would be consistent with the Optimum Basin Management Plan, Peace Agreement requirements, and the 2020 Storage Management Plan. The modeling also evaluated potential impacts to pumping sustainability in the existing well fields due to the planned extraction wells and groundwater travel time requirements between recharge locations (i.e., injection wells) and extraction wells. This early modeling input allowed the team to refine the PUT and TAKE components to better align with Chino Basin's functional requirements.

The finalized modeling work, provided as Appendix 4 to Volume 2 of this DPEIR, was utilized in the preparation of **Table 9**, below. This report was prepared by West Yost, and is titled "Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program" dated October 15, 2021.

The modeling runs evaluated the following PUT and TAKE components:

- Potential PUT locations, including initial and refined injection well locations in Chino Basin Groundwater Management Zone (MZ) 2.
- Potential TAKE locations in MZ-2 and MZ-3.
- Asymmetrical[8] PUT and TAKE with the majority of the groundwater recharge in MZ-2 and extraction in MZ-2 and MZ-3.

The following results were determined from the initial groundwater modeling:

- Confirmed that injection wells located in the northern portion of MZ-2 provides the capacity for the level of extraction contemplated in the CBP.
- The initial model runs indicated that hydraulic control was maintained throughout the entire program period under the assumed CBP operations.
- Impacts to net recharge[9] were minimal (see **Table 8**) under the assumed CBP operations. Scenarios with an early TAKE result in an increase of net recharge compared to the baseline condition.
- Any new risk of land subsidence due to the assumed CBP operations is projected to be minor and only occur in areas where new risks of land subsidence were already projected to occur under baseline conditions.
- The displacement of known groundwater contaminant plumes in the Chino Basin due to the assumed CBP operations is projected to be minor.
- The refined MZ-2 injection well locations (selected to reduce purified water conveyance infrastructure) and the assumed operations of the injection and extraction wells meets travel time requirements for the recharge of recycled water.
- Increased pumping sustainability challenges at existing wells are localized and temporary and can be mitigated.

[8] Asymmetrical is when some or all the PUT operations do not occur in the same MZ(s) as the TAKE operations.
[9] Net recharge is net inflow to the basin excluding the direct recharge of Supplemental Water.

- Impacts to the Basin due to asymmetrical PUT and TAKE for recharge in MZ-2 and extraction in MZ-2 and MZ-3 are projected to be minor.

Table 9 summarizes the initial groundwater modeling runs with the PUT and TAKE assumptions and the corresponding results.

Table 9
SUMMARY OF GROUNDWATER MODELING

Scenario Model Run	PUT Assumptions	TAKE Assumptions[1]	TAKE Option	Results
1	• 15,000 AFY via 12 injection wells in MZ-2[2]	• Standard Delivery[3] (50,000 AFY) • Extraction in MZ-2 • Call occurs in last 3 years of a 10-year cycle (e.g., Years 8-10)	1, 3, 7	• Achieved hydraulic control • Decrease in net recharge compared to baseline of about 400 AFY • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2
2	• 15,000 AFY via 12 injection wells in MZ-2	• Standard Delivery (50,000 AFY) • Extraction in MZ-2 • Call occurs in first 3 years of a 10-year cycle (e.g., Years 1-3)	1, 3, 7	• Achieved hydraulic control • Increase in net recharge compared to baseline of about 840 AFY • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2
3	• 15,000 AFY via 12 injection wells in MZ-2	• Standard Delivery (40,000 AFY) • Extraction in MZ-2 • Call occurs in last 3 years of a 10-year cycle (e.g., Years 8-10) • Pumping of about 4,000 AFY in non-call years to increase total TAKE to equal the total PUT, less the average decrease in net recharge caused by the CBP scenario.	8	• Achieved hydraulic control • Decrease in net recharge compared to baseline (260 AFY) is accounted for by reduced TAKE • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2
4	• 15,000 AFY via 12 injection wells in MZ-2	• Standard Delivery (40,000 AFY) • Extraction in MZ-2 • Call occurs in first 3 years of a 10-year cycle (e.g., Years 1-3) • Pumping of about 4,400 AFY in non-call years to increase total TAKE to equal the total PUT.	8	• Achieved hydraulic control • Increase in net recharge compared to baseline of about 680 AFY • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2
5	• 12,000 AFY via 12 injection wells in MZ-2	• Standard Delivery (40,000 AFY) • Extraction in MZ-2 • Call occurs in last 3 years of a 10-year cycle (e.g., Years 8-10)	8	• Achieved hydraulic control • Decrease in net recharge compared to baseline of about 330 AFY • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2
6	• 12,000 AFY via 12 injection wells in MZ-2	• Standard Delivery (40,000 AFY) • Extraction in MZ-2 • Call occurs in first 3 years of a 10-year cycle (e.g., Years 1-3)	8	• Achieved hydraulic control • Increase in net recharge compared to baseline of about 680 AFY • Localized and temporary pumping sustainability challenges in existing well fields in MZ-2

Notes: [1]No pre-delivery was assumed for all initial model runs since this is the most conservative extraction assumption. Pre-delivery would have less impacts on the Chino Basin.
[2]Several additional wells are planned to be constructed for the CBP to provide redundant capacity. These are assumed to be inactive in the model.
[3] Standard delivery (no pre-delivery): The TAKE facilities would be sized to deliver the specified AFY of groundwater from the Chino Basin to MWD regional facilities or directly to member agencies.

3.9.2 Tertiary Recycled Water Supply and Quality

To meet the CBP objectives, various recycled water supply sources were considered that would allow IEUA to expand both direct use and groundwater recharge of tertiary recycled water as well as meet the future needs of CBP. The CBP will require 17,000 AFY of tertiary recycled water to produce 15,000 AFY of purified water.

The recycled water supply sources considered for the CBP include IEUA, the Rialto WWTP, and the Western Riverside County Regional Wastewater Authority (WRCRWA) treatment plant. The seasonal and diurnal availability of recycled water could impact the AWPF sizing and operations. An evaluation of seasonal availability was also conducted to confirm that the AWPF could be supplied with a constant supply of recycled water to most cost-effectively produce purified water. New recycled water supplies that can provide constant flow year-round, such as WRCRWA and the Rialto WWTP, have the biggest benefit to the CBP to supply the AWPF at a constant rate and eliminate the need for seasonal storage.

Diurnal recycled water supply fluctuations were assumed to be managed with existing and new equalization basins and recycled water storage tanks, which will be analyzed in more detail in future phases of the Program. The external recycled water supplies both have existing or planned equalization that will allow them to deliver a constant recycled water supply to IEUA's system Equalization basins to manage diurnal recycled water supply fluctuations within IEUA's system were assumed for the AWPF components.

An analysis of IEUA's recycled water system was also completed using IEUA's recycled water model to confirm that recycled water can be conveyed to the appropriate locations in the recycled water system to meet current and future direct use and tertiary GWR demands as wells as future CBP demands.

Overall Recycled Water Quality
The overall impact of recycled water quality on the AWPF design is discussed in this section.

At RP-4, it is assumed that the AWPF influent would similarly reflect the RP-4 values reported in **Table 10** with slightly lower chloride, sodium, pH, and NDMA levels for 60 percent of the influent flow on average. The remaining 40 percent of the RP-4 AWPF influent flow would reflect the water quality from IEUA's recycled water distribution system, comprised of a varying blend of recycled water from RP-1, WRCRWA, and/or the Rialto WWTP. **Table 10** summarizes the projected water quality for the proposed RP-4 AWPF assuming the following for each condition and this projected water quality was used to develop the CBP scenarios considering the AWPF at RP-4 AWPF.

- **Average:** 60 percent RP-4 and 40 percent RP-1.
- **Minimum:** Minimum of RP-4, RP-1, WRCRWA, and the Rialto WWTP.
- **Maximum:** Maximum of RP-4, RP-1, WRCRWA, and the Rialto WWTP.

Table 10
PROJECTED AWPF INFLUENT WATER QUALITY

Constituent (1)	Average	Min	Max
Calcium (mg/L Ca^{2+})	41	25	68
Magnesium (mg/L Mg^{2+})	9.4	7.0	11
Sodium (mg/L Na^{+})	96	75	140
Potassium (mg/L K^{+})	15	14	18
Barium (mg/L Ba^{2+})	0.012	0.008	0.053
Copper (mg/L Cu^{+2})	0.004	0.0004	0.079
Iron (mg/L Fe^{2+})	0.068	0.000	0.112
Manganese (mg/L Mn^{2+})	0.018	0.002	0.037
Ammonium (mg/L NH_{4+} as N)	<0.1	<0.1	14.0
Aluminum (mg/L Al^{3+})	0.077	0.024	1.2
Bicarbonate (mg/L HCO_{3-})	166	100	230
Sulfate (mg/L SO_4^{2-})	52	39	264
Chloride (mg/L Cl^{-})	112	58	190
Fluoride (mg/L F^{-})	0.22	0.10	0.54(2)
Nitrate (mg/L NO_{3-} as N)	5.1	2.7	12
Phosphate (mg/L PO_4^{3-})	2.6	0.1	12
Silica (mg/L SiO_2)	22	4.0	31
pH	7.06	5.9	8.5
Alkalinity (mg/L as $CaCO_3$)	136	82	178
Hardness (mg/L as $CaCO_3$)	142	91	230
Boron (mg/L)	0.24	0.18	0.63
TOC (mg/L)	4.9	3.4	48
TDS (mg/L)	475	199	660*
1,4-Dioxane (µg/L)	1.0	ND	1.1
NDMA (ng/L)	4.4	<1.4	7.0
NMOR (ng/L)	66	6.9	350
Temperature(°C)	25	16(3)	36

Notes: This data assumes an Average of 60 percent RP-4 and 40 percent RP-1; a Minimum of RP-4, RP-1, WRCRWA, and the Rialto WWTP; and, a Maximum of RP-4, RP-1, WRCRWA, and the Rialto WWTP.
(2) Removed 68 mg/L outlier from WRCRWA data set.
(3) Removed 6.7°C outlier from WRCRWA data set.

Recycled Water Hydraulic Modeling

The recycled water model was used to support the development of CBP scenarios to (1) complete a recycled water distribution analysis to confirm that IEUA's existing recycled water system has sufficient capacity to convey water and maintain adequate pressures once the external supplies and the AWPF are incorporated into the system and (2) estimate tertiary recycled water pumping requirements whether the AWPF is located at RP-1 or RP-4.

The elements of the recycled water system included in the hydraulic model and recent system improvements are listed below:

- Pipelines: The recycled water pipelines are included in the hydraulic model, and include the pipeline length, diameter, roughness coefficient, and a check valve if the pipe does not allow reverse flow. The Baseline Pipeline and the Napa Lateral pipelines were constructed after the 2016 model calibration and are included in the model.
- Junction: The junctions in the recycled water model are necessary to connect joining pipelines at intersections. The elevation is defined at the junctions and necessary for the model to calculate system pressures. The system demands and demand patterns are also applied to the junctions.
- Tanks: The recycled water system includes 22.5 MG of available storage within six storage tanks. These tanks provide operational storage during times of peak demands. The modeled tanks include properties such as elevation, minimum and maximum water level, and diameter.
- Pumps: The pumps at each pump station are included in the model and run based on their pump curve and operational controls. The RP-1 1158 Pump Station was recently upgraded to include higher capacity pumps and was also updated in the model.
- Reservoirs: Fixed head reservoirs[10] are used to model the water recycling plants.
- Valves: The model includes both pressure reducing valves (PRV) and flow control valves (FCV). The PRVs are representative of actual PRVs in the recycled water system that allow higher pressure zones to supply lower pressure zones. The PRVs includes the valve diameter, pressure setting, and operational controls as applicable. The FCVs in the model are located on the discharge side of IEUA's water recycling plants to control the recycled water supply. Diurnal production curves developed from the SCADA data during the 2016 calibration are applied to each plant to mimic the actual production at each plant throughout the day.

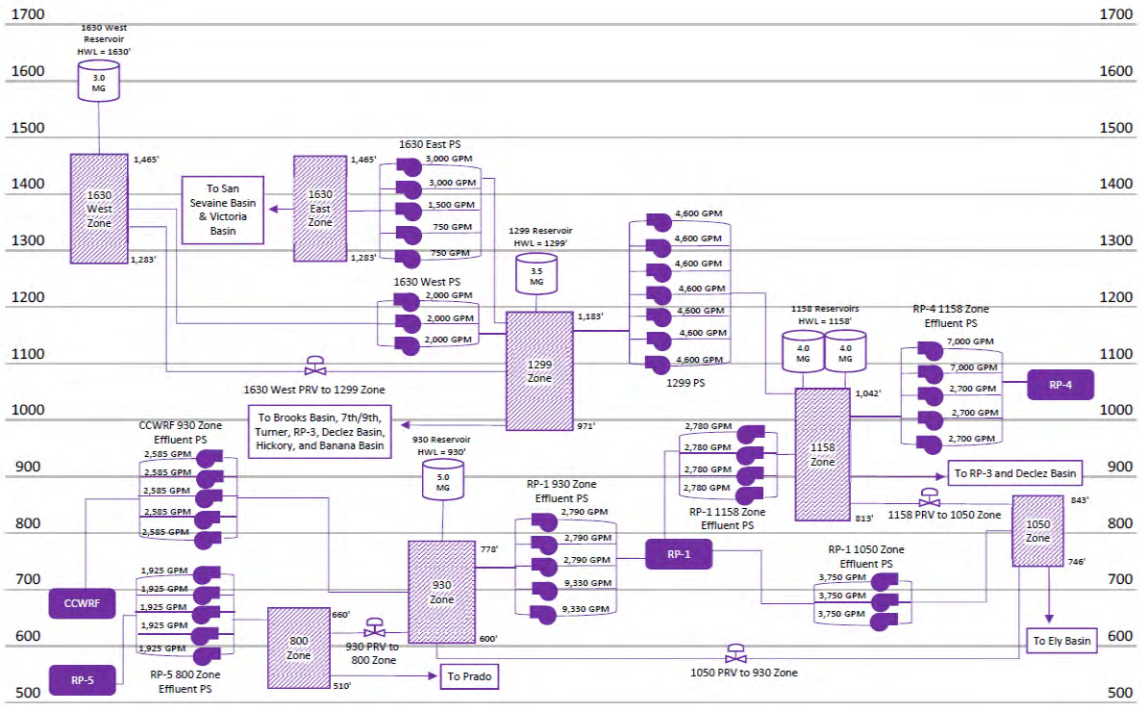

Exhibit 9: Recycled Water System Hydraulic Profile

[10] The reservoir is operated by a specified head elevation. This elevation is maintained in the model.

3.9.3 Advanced Water Purification

The PUT options include advanced water purification to meet long-term salinity requirements in the Chino Basin. In addition, subsurface application through injection wells is assumed for groundwater replenishment, which also requires purified water. This section discusses the AWPF assumptions for the PUT options.

Potential AWPF Locations

The potential AWPF locations impact treatment process selection and infrastructure requirements for tertiary recycled water, purified water, and brine conveyance. The closer that the AWPFs can be sited to source water supply (tertiary recycled water), the groundwater recharge locations, and brine disposal will result in lower capital and operating costs. To avoid additional costs and schedule delays associated with siting and purchasing land for an AWPF, only IEUA-owned or stakeholder-owned properties were considered.

Of IEUA's existing four regional water recycling facilities (RP-1, RP-4, RP-5, and CCWRF), RP-1 and RP-4 were identified as the two most-feasible locations for the future AWPF. However, ultimately, the Technical Memorandum No. 2 (TM2), Chino Basin Put, Take, and Program Alternatives Evaluation (Appendix 2) indicates that RP-4 has been selected as the preferred location for the AWPF over RP-1 due to its proximity to recharge basins, its greater capacity to pump to recharge basins, future injection wells, space availability, ability to integrate with future direct potable reuse opportunities and proximity of surface water treatment plants, its consistency with the SFI recharge prioritization, and overall operational flexibility. An AWPF at RP-4 will meet regulatory and permit requirements. Additionally, RP-4 is located near extensions of the Non-Reclaimable Wastewater System (NRWS) for brine disposal.

Purified Water Goals

Purified water must meet the treatment goals set forth by the CCR Title 22 Division 4, Chapter 3, Article 5.2 for IPR and groundwater replenishment through subsurface application. In addition, product water must meet the Basin Plan groundwater objectives for minerals and drinking water MCLs and Recycled Water Policy requirements regarding the SNMP, maximum benefit, and monitoring constituents of contaminants of emerging concern in the Upper Santa Ana River Basin (hydraulic sub area 801.21). **Table 11** summarizes the treated water goals based on this regulatory framework.

Table 11
PURIFIED WATER GOALS FOR IPR GROUNDWATER REPLENISHMENT VIA SUBSURFACE INJECTION IN THE UPPER SANTA ANA RIVER BASIN

Parameter	Criteria	Regulation
Enteric Virus	>12 log reduction	CCR
Giardia cysts	>10 log reduction	CCR
Cryptosporidium oocysts	>10 log reduction	CCR
TOC	≤ 0.25 mg/l in 95% of weekly samples within first 20 weeks ≤ 0.5 mg/L 20-week running average and average of last 4 weekly samples	CCR
Total Nitrogen	≤ 10 mg/L average of twice weekly samples	CCR
Nitrate (as N)[1]	≤ 4.2 mg/L 5-year running average	Basin Plan
1,4-dioxane	>0.5 log reduction by AOP	CCR

Parameter	Criteria	Regulation
Inorganic Chemicals in Table 64431-A, except for nitrogen compounds	≤ MCLs in quarterly samples	CCR
Radionuclide Chemicals in Tables 64442 and 64443	≤ MCLs in quarterly samples	CCR
Organic Chemicals in 64444-A	≤ MCLs in quarterly samples	CCR
Disinfection Byproducts in Table 64533-A	≤ MCLs in quarterly samples	CCR
Lead and Copper	90th percentiles ≤ Action Levels	CCR
Secondary Drinking Water Contaminants in Tables 64449-A and 64449-B	≤ sMCLs in annual samples	CCR
Priority Toxic Pollutants in 40 CFR Section 131.38	≤ DDW-specified priority toxic pollutants and NLs[(2)] in quarterly samples	CCR
DDW-Specified Chemicals based on Engineering Report, Affected Groundwater Basin(s), and Wastewater Source Control	As specified by DDW in quarterly samples	CCR
NDMA	≤ 10 ng/L	CCR
TDS[1]	≤ 680mg/L	Basin Plan
Chloride	≤ 500 mg/L	Basin Plan
Sulfate	≤ 500 mg/L	Basin Plan
Boron	≤ 0.75 mg/L	Basin Plan
Sodium	≤ 180 mg/L for municipality use	Basin Plan
Sodium Absorption Ratio	≤ 9 for agricultural use	Basin Plan

Notes: [1] Criteria applies the Basin Plan's "Maximum Benefit" objectives but if the Regional Board determines it is lowering the water quality and not a maximum benefit to the Basin, the "Antidegradation" objectives will apply with Nitrate (as N) and TDS needing to meet 2.9 mg/L and 250 mg/L, respectively, for a 5-year running average (RWQCB – SA, 2019).
[2] Notable among which is the NDMA goal of 10 ng/L or less. (Listed as a separate row in this table for emphasis)
[3] A draft of the Lead and Copper Rule Long-Term Revisions was published in November 2019 and a final rule is expected to be released in fall 2020. Compliance is likely to begin around 2023.

Process Rationale

IEUA is planning to upgrade the secondary treatment systems at both RP-1 and RP-4 plants with membrane bioreactor (MBR) systems, although the RP-1 upgrade is planned in the near term (online by 2030) and RP-4 is in the long term (approximately 2040). It is assumed that if the AWPF is implemented at RP-4 the treatment train would be *Membrane Filtration (MF)- Reverse Osmosis (RO)- Ultraviolet (UV) Advanced Oxidation Process (AOP) (MF-RO-AOP)*. IEUA could potentially convert an AWPF at RP-4 to MBR-RO-AOP when the MBR is implemented at RP-4. As IEUA has selected RP-4 as the preferred AWPF location, the *Membrane Bioreactor (MBR)-Reverse Osmosis (RO)- Ultraviolet (UV) Advanced Oxidation Process (AOP) (MBR-RO-AOP)* treatment train at RP-1 will not be discussed further in this Project Description.

This process train—MF-RO-AOP—is described in subsequent sections.

RP-4 Membrane Filtration (MF)- Reverse Osmosis (RO)- Ultraviolet (UV) Advanced Oxidation Process (AOP) (MF-RO-AOP)

All existing potable reuse facilities in California utilize MF as pretreatment for RO. MF removes suspended solids, reduces turbidity, and achieves credit for up to 4-log reduction of protozoa through daily integrity testing. If the AWPF is constructed at RP-4, then the treatment train would be MF-RO-AOP since the future conversion at RP-4 to MBR is planned for the long term.

Additionally, the MBR-RO-AOP process at RP-1 would remove pathogens including Virus, *Giardia* cysts, Virus, and *Cryptosporidium* oocysts to at or below the minimum regulatory requirements. If

desired, IEUA could claim additional virus credit through final chlorine disinfection though this level of treatment is not required at this time (refer to Appendix 1 [TM1, Subsection 4.2.3] for the specific pathogen log removal credits).

AWPF Capacity and Redundancy Assumptions

The most economical approach to size an AWPF is to provide a near constant flow of approximately 17,000 AFY to produce the purified water goal of 15,000 AFY. **Exhibit 10** shows the required flow rates and assumed recoveries MF-RO-AOP at RP-4. MF backwash waste would return to the upstream wastewater treatment plant in order to minimize losses through the system. During the water purification process, of the stream of recycled water that the AWPF would receive, a small percentage is lost to the water purification process. While available proprietary and non-proprietary high recovery RO treatment technologies could conceivably achieve 93% recovery, pilot testing achievable recovery on the anticipated water quality and corresponding impacts to concentrate disposal would be required before constructing a full-scale system.

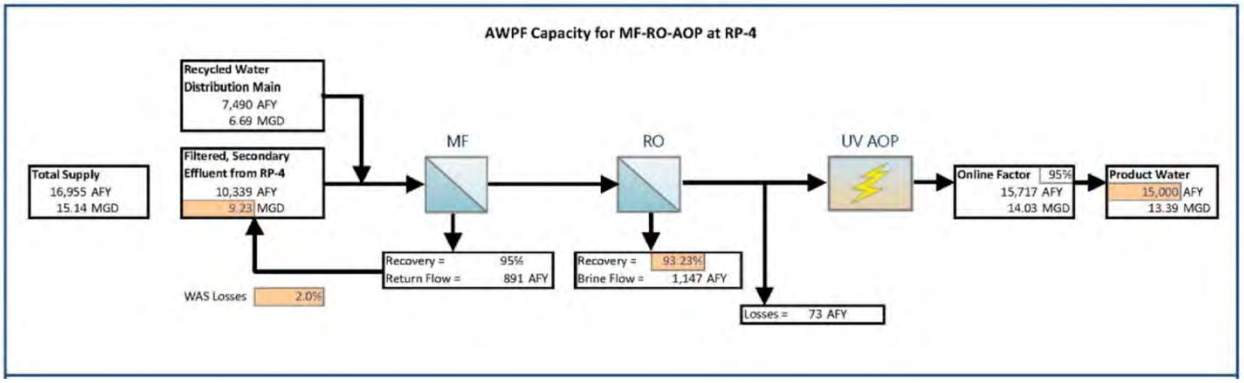

Exhibit 10: AWPF Capacities for MF-RO-AOP at RP-4

Redundancy requirements are established by the function of the facility and criticality of continuous full capacity operations. In order to maintain the high online factor required to reliably produce 15,000 AFY with limited supply, the design includes fully redundant trains for all processes. **Table 12** summarizes the redundancy planned for the AWPF along with the anticipated offline time.

Table 12
REDUNDANCY REQUIREMENTS

Process	Duty + Standby	Online Factor	Required Downtime
MF System			
MF Feed Tanks	1 + 0	98.6%	5 days per year to drain, clean, and inspect
MF Feed Pumps	3 + 1	100%	21 days per 5 years per pump
MF Strainers	3 + 1	100%	14 days per year per strainer
MF Trains	7 + 2	100%	12 days per year per train for CIP; 7 days per year per train for maintenance; 100 minutes per day for MC/backwash/PDT
MF Backwash Pumps	1 + 1	100%	21 days per 5 years per pump
MF Backwash Blowers	1 + 1	100%	2 days per year per blower

Process	Duty + Standby	Online Factor	Required Downtime
RO System			
RO Feed Tank	1 + 0	98.6%	5 days per year to drain, clean, and inspect
RO Feed Pumps	4 + 1	100%	21 days per 5 years per pump
Cartridge Filters	4 + 1	100%	1 day per 3 months per cartridge filter
RO Trains	4 + 1	100%	1 day per train per year for CIP; 28 days per 5 years per train for maintenance
RO Interstage Booster Pumps	4 + 1	100%	21 days per 5 years per pump
RO Flush Tank	1 + 0	98.6%	5 days per year to drain, clean, and inspect
RO Flush Pumps	1 + 1	100%	21 days per 5 years per pump
UV-AOP System			
UV Reactors	1 + 1	100%	14 days per year per reactor for bulb, sleeve, and ballast replacement
Factor to Account for Time to Switch Over to Duty Train in the Event of Failure		99.5%	20 failures per year; 2 hours to recover from each
Anticipated Online Time		**95.4%**	

The proposed AWPF located at RP-4 would utilize an MF-RO-AOP treatment process. The sizing assumptions for the 15,000 AFY AWPF at RP-4 are summarized in **Table 13**, below.

Table 13
SIZING ASSUMPTIONS FOR 15,000 AFY AWPF AT RP-4

Process or Facility	Description	Units	Value[1]
Equalization	Equalization Tank	MG	1.2[2]
MF System	MF system production capacity	MGD	15.1
	MF feed pumps	No.	3 + 1
	Capacity, per pump	gpm	4,700
	MF strainers	No.	3 + 1
	Capacity, per strainer	gpm	4,700
	MF trains	No.	7 + 2
	Filtrate flow, per train	gpm	1,500
	MF backwash pumps	No.	1 + 1
	Capacity, per pump	gpm	2,010
RO System	RO system production capacity	MGD	14.1
	RO feed tank	gal	105,000
	RO feed pumps	No.	4 + 1
	Capacity, per pump	gpm	2,640
	Cartridge filters	No.	4 + 1
	Capacity, per cartridge filter	gpm	2,640
	RO trains	No.	4 + 1
	Permeate, per train	gpm	2,450
	RO interstage booster pumps	No.	1 Per Train
	Capacity, per pump	gpm	650

Process or Facility	Description	Units	Value[1]
	RO flush tank	gal	18,900
	RO flush pumps	No.	1 + 1
	Capacity, per pump	gpm	900
UV-AOP System	UV-AOP system production capacity	MGD	14.1
	UV reactors	No.	2 + 1
	Flow, per reactor	gpm	4,900
Chemical Facilities	Sulfuric acid tank	No.	2
	Tank volume	gal	11,900
	Sodium hypochlorite tank	No.	2
	Tank volume	gal	13,100
	Caustic soda totes	No.	2
	Tote volume	gal	300
	Ammonium sulfate tank	No.	1
	Tank volume	gal	13,500
	Antiscalant tank	No.	1
	Tank volume	gal	6,100
	Hydrogen peroxide tank	No.	1
	Tank volume	gal	7,300
	Sodium bisulfite tote	No.	2
	Tote volume	gal	300
Post Treatment	Lime system	No.	2 + 0
	Decarbonator system	No.	2 + 0
CIP Systems	MF CIP system tanks	No.	2
	RO CIP system tanks	No.	2
	RO CIP cartridge filter	No.	1

Notes: [1]Equipment quantities are shown in the format of duty + standby, i.e., MF feed pumps are 3 + 1, or 3 duty + 1 standby.
[2]Size is limited by available space near existing chlorine contact basins. The size and location of the equalization tank will be evaluated in more detail during future phases of the project.

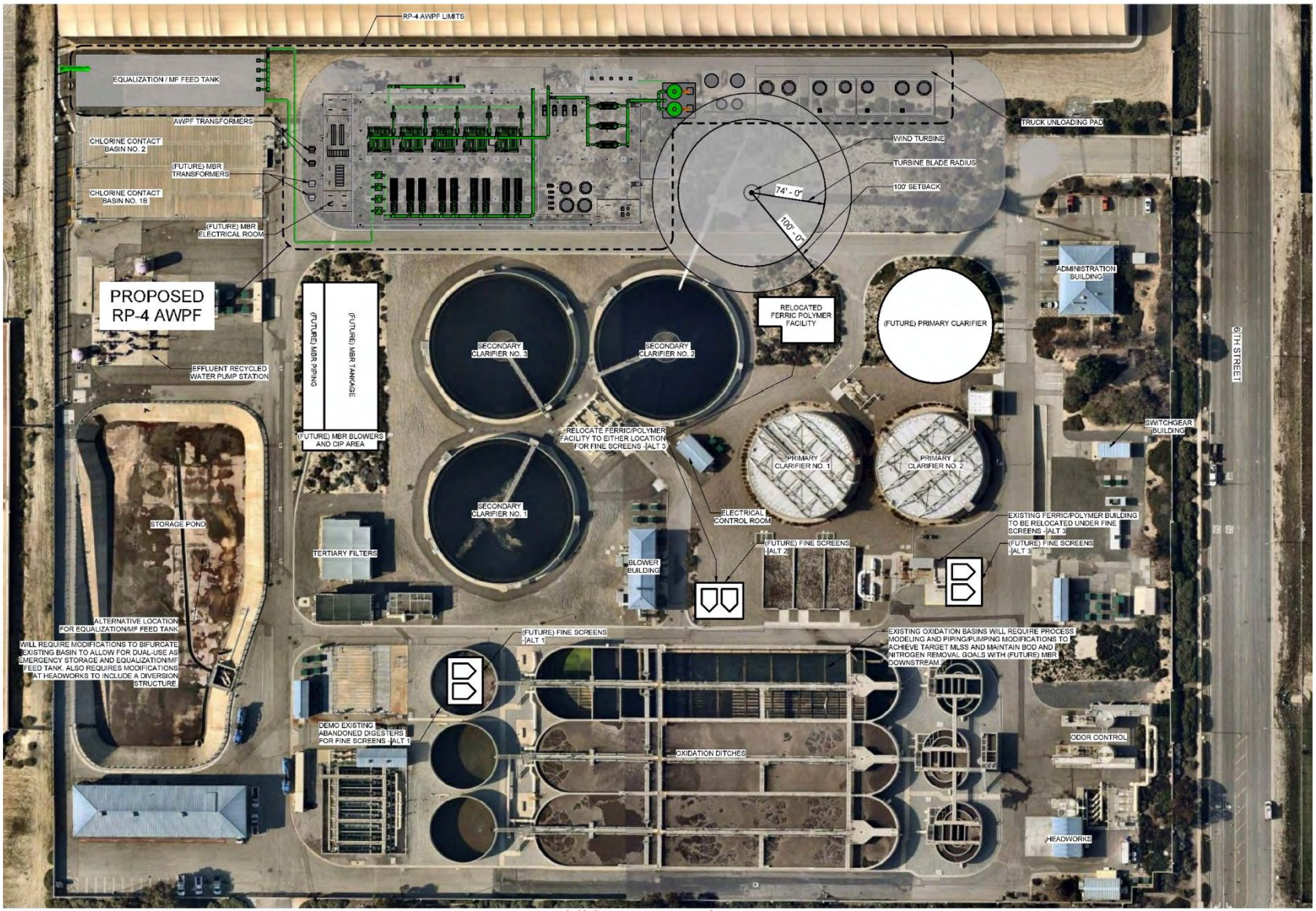

Exhibit 11: RP-4 Site Layout

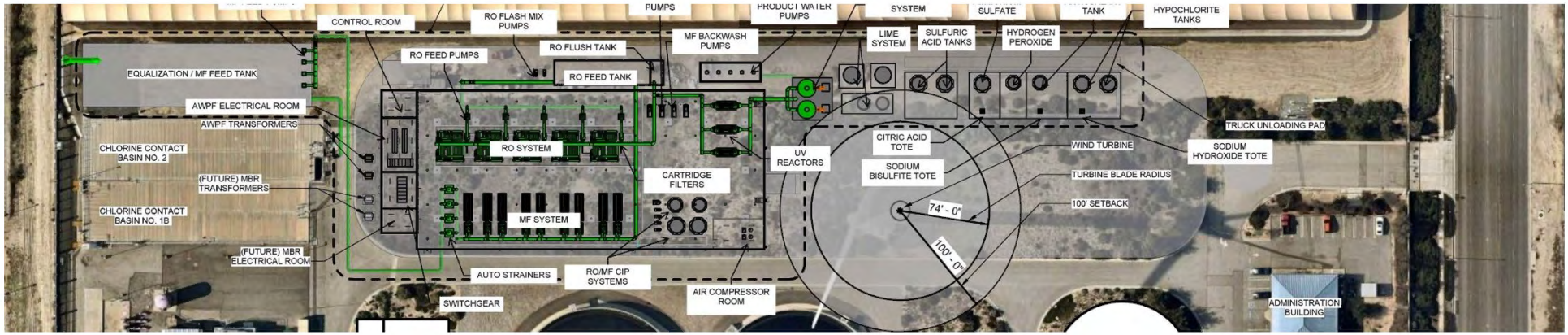

Exhibit 12: RP-4 AWPF Site Layout

Brine Disposal

As stated above, during the water treatment process, of the stream of recycled water that the AWPF would receive, a small percentage is lost to the water purification process. This small percentage that is lost to the water purification process is called brine. The AWPF requires brine disposal for the brine stream generated by RO treatment. Refer to Technical Memorandum 3 (TM3), provided as Appendix 3, which presents a summary of NRWS infrastructure, available capacity in each system, requirements for new connections and tie-ins, a summary of system costs for connection capacity and operations, and future considerations for brine conveyance and scaling mitigation. New connections to the NRWS consider the existing hydraulics, requirements for physical connection, and operations and maintenance.

IEUA operates the Non-Reclaimable Wastewater System (NRWS), which is infrastructure for disposal of high-salinity wastewater (brine) and other non-reclaimable high-strength wastewater. The NRWS is comprised of three pipelines shown on **Figure 3**: the NRWS pipeline, the Etiwanda Wastewater Line (EWL), and the Inland Empire Brine Line (IEBL). The NRWS is split into two service areas within IEUA's jurisdiction. The North NRWS is comprised of the NRWS pipeline and EWL, while the South NRWS is comprised of the IEBL. The NRWS pipeline and the EWL ultimately convey flow to the Los Angeles County Sanitation Districts (LACSD) through the Joint Outfall System (JOS). The IEBL directly conveys flow to the Orange County Sanitation District (OCSD) by gravity. The NRWS is shown graphically in **Exhibits 13 and 14**.

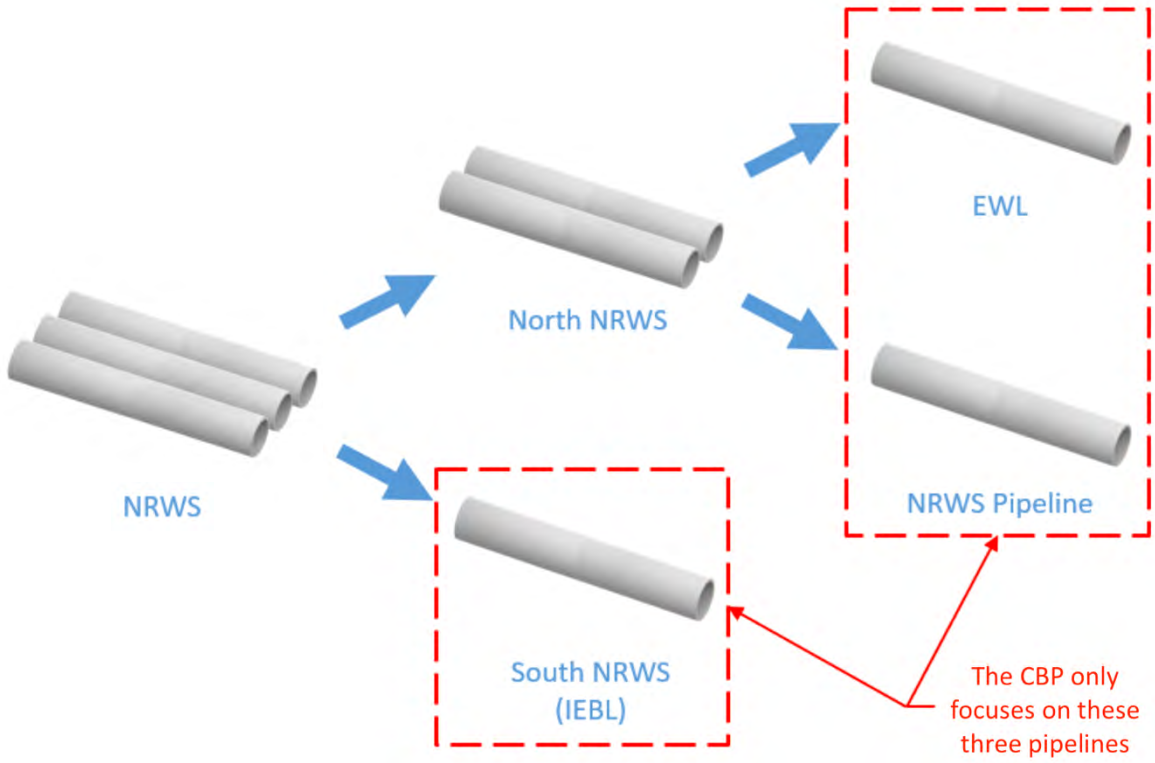

Exhibit 13: NRWS Nomenclature

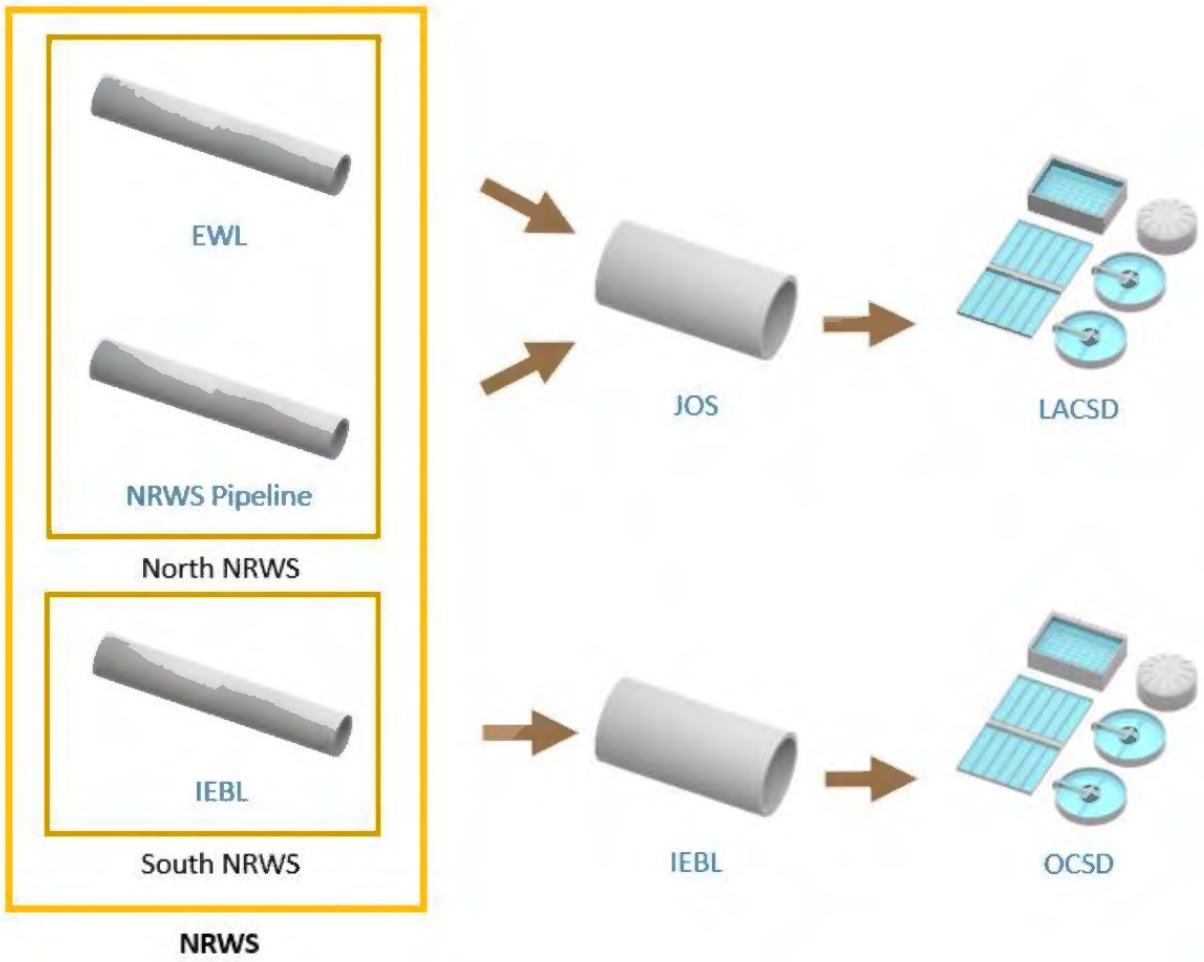

Exhibit 14: Overall System Schematic

New Connections to the NRWS

To discharge to the NRWS, the user must obtain a Wastewater Discharge Permit and purchase capacity units (CU) for the respective pipeline. The typical terms for the permit are five years for the NRWS pipeline and EWL and two years for the IEBL. Permit application and renewal fees vary by industry and are listed in the Resolutions for each pipeline. **Exhibit 15** summarizes the steps to obtain a permit.

Exhibit 15: Typical Process for Wastewater Discharge Permit

Plans detailing the facility layout, points of connection to the NRWS, and monitoring station must be submitted with the Wastewater Discharge Permit Application. The materials that must be submitted with the Wastewater Discharge Permit Application can be located at IEUA's website.[11]

3.9.4 Groundwater Recharge

The PUT options include recharging purified water to the Chino Basin to achieve two goals: capitalizing on storage within the Basin as well as reducing the overall salinity of the Basin. The groundwater recharge component includes both where to recharge the water and how to recharge the water.

This section discusses the groundwater recharge assumptions for the PUT options, which are presented in the following sections:

- Recharge locations in the Chino Basin, which need to consider the characteristics of the Chino Basin, groundwater quality, and recovery of the stored water.
- Recharge method, including injection wells and recharge basins
- Monitoring wells

Recharge Locations

The northern portion of MZ-2 was identified as the primary recharge location for purified water as part of the Storage Framework Investigation (WEI, October 2018). The northern portion of MZ-2 is generally outside of known areas of contamination and does not have known subsidence constraints or significant pumping depressions. The Storage Framework Investigation also included managed storage and recovery programs within operational bands 2, 3, and 4. For these storage and recovery programs, ASR wells, which can be used for both injection and extraction, were assumed in the northern MZ-2 area in two east-west alignments in Rancho Cucamonga. ASR wells were not considered in the CBP as current regulations do not allow ASR wells to inject and extract purified recycled water, although this may be considered in the future with evolving regulations.

For the PUT options, two sets of potential injection well locations in MZ-2 were identified, which are as follows:

Initially, potential injection well locations were identified in MZ-2 in Rancho Cucamonga in similar locations as assumed for the Storage Framework Investigation. One east-west alignment was assumed on the Pacific Electric Inland Empire Trail and one along Foothill Boulevard.

In order to reduce the infrastructure required to convey the purified water from the AWPF to the injection wells, a second set of injection well locations have been identified in MZ-2. These were located further south than the initial set (closer to both RP-1 and RP-4) to reduce the overall purified water pipeline lengths. The east-west alignments of injection wells were assumed along Foothill Boulevard and Arrow Route in Rancho Cucamonga.

Preliminary groundwater modeling was completed for both sets of preliminary injection well locations and results indicate that both options align with the OBMP objectives and the SFI. The second set of injection wells (located on Foothill Boulevard and Arrow Route) are assumed for the PUT options to reduce the overall infrastructure costs. This scenario would reduce the infrastructure required to convey the purified water from the AWPF to the injection wells. These

[11] https://www.ieua.org/everything-water/pretreatment-source-control/wastewater-discharge-permits/

were located further south and closer to both RP-1 and RP-4 to reduce the overall purified water pipeline lengths. The east-west alignments of injection wells were assumed along Foothill Boulevard and Arrow Route in Rancho Cucamonga. Injection wells in MZ-1 and MZ-3 were also investigated as part of the project:

Recharge Method

Existing recharge basins are used to recharge a combination of stormwater, tertiary recycled water, and imported water into the Basin. These recharge basins are highly utilized, especially seasonally during storm events, and do not have sufficient year-round capacity for the additional purified water (15,000 AFY) to be recharged as part of the CBP. The PUT options were developed assuming injection wells would be used to recharge purified water.

Injection Wells

Injection wells will be used to recharge purified water to the Chino Basin drinking water aquifers. Injection wells allow for consistent recharge of specific aquifers and are not subject to stormwater capacity restraints like recharge basins. Each injection well will be constructed to the State of California regulations. Each well site will include a concrete pad, superstructure, necessary safety features, signage, and flowmeters. Each injection well is estimated to require a site space of 100 feet by 100 feet (0.23 acres) that will accommodate the initial well construction, the wellhead equipment, and future well maintenance and redevelopment. It is assumed that land would need to be purchased for each injection well. An example injection well site is shown in Photo 1, below.

Photo 1: Example Injection Well Site

The capacity of each injection well is assumed to be 50 percent of the average pumping rate of nearby production wells. Based on the data included in the Storage Framework Investigation (WEI, October 2018) and the characterization of each management zone, the estimated injection wells capacities for MZ-2 are 830 gpm and 3.77-acre feet per day (AFD).

Preliminary groundwater modeling was completed for preliminary injection well locations and results indicate that the proposed PUT options align with the OBMP objectives and the Storage Framework Investigation. The second set of injection wells (located on Foothill Boulevard and

Arrow Route) are used for the PUT options as the superior option to reduce the overall infrastructure costs.

Table 14 summarizes the MZ-2 injection wells assumed for the PUT options. The number of injection wells was determined using the maximum capacity per well, defined above.

Table 14
MZ-2 INJECTION WELLS

Recharge Goal (AFY)	Maximum Capacity per Injection Well (gpm)	Conceptual Design	
		Number of Injection Wells	Capacity per Injection Well (gpm)
15,000	830	Duty = 12, Standby = 4 Total = 16	775

Injection well capacities are dependent on the well maintenance and other operational assumptions. Standard injection well operational procedures include assuming wells do not sit idle for longer than one week, are exercised near design flow rates, are backflushed for approximately one hour a week, and are rehabbed every three to five years. Redundant injection wells are recommended to allow for backflushing and well rehabilitation while meeting the continuous recharge rate of 15,000 AFY. Test injection wells are likely to be required to collect site specific information to guide injection well design.

The recommended redundancy for injection wells is one standby well for every three active wells. For example, if all 15,000 AFY (41.1 acre-feet per day (AFD)) is proposed to be recharged in MZ-2, then 12 operating wells and four standby wells (16 wells total) are recommended based on the estimated MZ-2 injection well capacity projected above, and the recommended redundancy requirements. One example operating scenario would be to group the wells into four sets of four wells each where at any one time three wells would be active and one standby. The active wells would be cycled on a weekly basis to make sure that each well is not inactive for more than a week.

Monitoring Wells

Per the Title 22 regulations for groundwater replenishment using recycled water, monitoring wells are required to monitor water quality in the groundwater Basin. The regulations require that at least two monitoring wells be constructed downgradient of the replenishment location. One must be located at least two weeks but no more than six months downgradient travel time through the aquifer and at least 30 days upgradient from the nearest drinking water well, and the second well must be located between the replenishment location and the nearest downgradient drinking water well. A total of 4 monitoring wells were included in each PUT option to comply with these requirements.

3.9.5 PUT Facilities Summary

PUT Option 5 (PUT-5) assumes that the AWPF is located at RP-4, where 15,000 AFY of purified recycled water is produced and recharged into MZ-2. The elements of PUT Option 5 are as follows:

- Recharge location
    - MZ-2: All purified water would be recharged via injection wells in MZ-2, which is consistent with the Storage Framework Investigation.

- AWPF
  - The AWPF (MF-ROP-AOP) would be located at RP-4. The preliminary RP-4 AWPF layout is shown in **Exhibit 12**.
- Conveyance
  - Purified water would be pumped from the AWPF to the injection well sites in MZ-2.
  - Brine from the AWPF would be pumped in to the NRWS pipeline and conveyed to LACSD for disposal.

PUT Option 5 is summarized in **Table 15** and shown in **Figure 4**.

Table 15
PUT FACILITIES

Parameter	Description
Recharge Locations	MZ-2
AWPF	
Location	RP-4
Process	MF/RO/UV-AOP
Capacity (AFY)	15,000
Purified water conveyance	
Pipelines[1]	7.1 miles (8-inch to 30-inch)
Pump station[2]	
Location	RP-4
Size	1,500 HP
Number of injection wells	16 (12 duty, 4 standby)
Brine conveyance[3]	
Disposal system	NRWS
Pipeline	1,400 ft (8-inch)

Notes: [1]Pipelines are discussed under Subsection 3.11, 3.10.5, and 3.10.6
[2]Pump Stations are discussed under Subsection 3.10.5 Delivery to Hydraulic Elevations Above the Blending Reservoir
[3]Brine Conveyance is discussed under Subsection 3.11.4 and 3.9.3, above.

3.10 CHINO BASIN PROGRAM TAKE FACILITIES

The CBP includes two main categories of facilities: PUT, the components to recharge purified water to the Chino Basin, and TAKE, the components to extract groundwater and convey potable water supply. The TAKE components are as follows, with the corresponding section noted:

- Groundwater extraction and treatment
- Potable water pumping and conveyance
- Potable water usage
  - MWD pump back
  - In lieu usage

To support the development of the PUT and TAKE options, and program scenarios, WEI completed initial groundwater modeling for the PUT and TAKE components. The initial groundwater modeling results are discussed in Subsection 3.9.1. The following table summarizes the TAKE Options that will be considered as part of the overall CBP Project.

Table 16
TAKE OPTIONS SUMMARY

TAKE Options	Description			Call Year Deliveries			Total Delivery over 25 Years		
	Pump Back and/or In-Lieu	Standard Delivery		Pump Back (AFY)	In-Lieu (AFY)	Total (AFY)		Call Year Deliveries (AF)	Total (AF)
TAKE-1	100% Pump Back	Standard		50,000	-	50,000		375,000	375,000
TAKE-3	Partial Pump Back and Partial In-Lieu	Standard		25,500	24,500	50,000		375,000	375,000
TAKE-7		Standard		28,000	22,000	50,000		375,000	375,000
TAKE--8	Partial Pump and In-Lieu	Standard		10,000	30,000	40,000		300,000	300,000

3.10.1 Groundwater Extraction and Storage

The goal of the TAKE components is to deliver the 375,000 AF of potable water from the Chino Basin over the 25-year life of the CBP. The 375,000 AF would replace water supply that would otherwise be imported from the Sacramento-San Joaquin Delta (Delta), which will be done either by delivering extracted groundwater to MWD's regional facilities for eventual distribution to member agencies (MWD pump back), or by delivering groundwater directly to member agencies for their use in-lieu of receiving imported water deliveries from MWD, which is referred to as In-Lieu CBP.

The 375,000 AF would be used during dry years (call years) when less water is imported from the Delta. Two groundwater extraction scenarios were assumed for the TAKE options:

- Standard delivery (no pre-delivery): Assuming a maximum pumping rate of 50,000 AFY, 7.5 call years would occur over the 25-year life of the project. The TAKE facilities would be sized to deliver 50,000 AFY of groundwater from the Chino Basin to MWD regional facilities or directly to member agencies.

An option to directly delivering extracted CBP groundwater to member agencies for in-lieu use is to provide new local wells or wellhead treatment to existing wells, which is referred to as In-Lieu Local. Examples for this type of in-lieu use include adding groundwater treatment to wells that are currently offline due to groundwater contamination. For these example In-Lieu Local projects, up to 3,000 AFY is assumed to be treated at member agency wells, for a total of 6,000 AFY if two such projects are implemented. This sum of water would already be within member agency service areas and is assumed to not require any additional infrastructure other than wellhead treatment. This would reduce the total amount of water required to be extracted from the proposed extraction wellfield and conveyed through TAKE facilities by up to 6,000 AFY.

Extraction Wells
Multiple extraction wells are required to meet baseline (50,000 AFY) project option. Up to 17 extraction wells would be required depending upon the option selected.

Site Selection

The location of potential extraction well sites was determined through the identification of land within the Chino Basin with the following attributes:

- Undeveloped parcels.
- Parcels located at the intersection of streets. These sites would provide for easy access to the site during construction, maintenance, and rehabilitation activities.
- Located within the groundwater MZ desired for extraction well options (predominantly MZ-2 as evaluated in the SFI)

It was assumed that the minimum extraction well size would need to be a minimum of 100 feet by 100 feet (0.23 acres) to allow for construction, periodic well rehabilitation, and the drilling of a new well, should the original well fail and need to be replaced. Photo 2 is a photo of a well site measuring 100 feet by 100 feet during well rehabilitation. As shown, well rehabilitation (and drilling) activities required adequate space for pump column laydown, well rig placement, spoils placement, and decant tanks for well development.

Photo 2: Well Rehabilitation Activities

Production Capacity

The estimated flowrates of proposed wells in the area are between 1,500 gpm and 2,000 gpm, based on production data from other nearby wells. It is assumed that one redundant well would be constructed for each option such that the firm production capacity with the largest well offline would still produce the amount of CBP water required for the option. A sampling port would be installed at all wellheads to facilitate routine water quality sampling. Each well would be able to deliver water to an HGL of 1,180 feet (ft), which is the operational water elevation of the proposed blending and storage reservoir. Chlorine would be injected at each wellhead to prevent biological growth in well collector pipelines.

Well Collector Pipelines
A network of pipelines would be installed to connect each well to the blending and storage reservoir. The collector pipeline diameters would range from 12- to 54-inch, and are sized to keep pipeline velocity below 5 feet per second (fps). Collector pipes are considered separately from the regional potable pipelines because they would convey raw groundwater to a reservoir for blending. After blending in the reservoir and addition of chlorine, the water would be considered potable. It is assumed that additional groundwater treatment would not be necessary as water quality in the proposed wellfield location meets drinking water standards. If additional treatment becomes necessary in the future, either a wellhead or centralized treatment facility can be integrated and located at either an individual well site or adjacent to the blending and storage reservoir.

Redundancy Requirements
It is assumed that one redundant well would be required for each option to accommodate capacity loss from hydrogeologic conditions, poor water quality, or maintenance shutdowns. In the event multiple wells are offline or have reduced production capacity at a given time, the online wells can be pumped at a higher rate until the wells are back online. The extraction wells design should include variable frequency drives (VFD) and the ultimate design point should be at maximum drawdown and lowest anticipated static groundwater level so that additional production is possible.

Blending and Storage Reservoir
A circular, prestressed tank storage reservoir is recommended near the extraction wellfield to collect groundwater from all proposed wells prior to MWD pump back and/or in-lieu usage by agencies. The storage reservoir will have two purposes:

1. If an extraction well begins to pump contaminated groundwater, the reservoir will provide an opportunity for blending, which can avoid taking the well offline or the need for treatment.
2. The storage reservoir will serve as a forebay for the pump station that will be needed to boost water to elevations well above the extraction well field, and to break head for water to be delivered to lower elevations. This will also provide a constant head for the wells to pump against, rather than having the variability of discharge pressure that may come from having the wells pump directly into a high-pressure transmission line.

The reservoir would provide short-term storage and blending. Because the reservoir will primarily be used for blending and not storage, it is assumed that the reservoir volume would be determined based on retention time, and not hours of stored water available to meet demands. For blending purposes, it is assumed the retention time would need to be three hours. The reservoir outlet(s) will serve as the sampling point for water quality analyses for potable water.

Groundwater treatment for centralized extraction wells is not anticipated due to the groundwater extraction locations being focused in the better water quality areas of MZ-2, blending in the storage reservoir, and water quality in MWD's Rialto Pipeline. In the event that treatment is needed in the future, the land acquired for the reservoir should to be large enough to accommodate a future treatment system.

3.10.2 Groundwater Treatment

Groundwater treatment for the centralized extraction wells is not anticipated but could be needed for In-Lieu Local projects where wellhead treatment is added to existing wells that are out of service due to groundwater contamination. Potential groundwater treatment technologies that could be used for wellhead treatment for potential In-Lieu Local projects include reverse osmosis, advanced oxidation, ion exchange, granular activated carbon (GAC), and biological treatment.

Based on the potential groundwater contaminants that may be found in the Chino Basin, a wide variety of treatment processes must be evaluated; these processes all have various degrees of efficacy depending on the mix of contaminants present. Groundwater treatment technologies may include more conventional best available technologies (BAT) or biological treatment, the latter being an emerging treatment technology in the water sector. **Exhibit 16** shows the range of conventional treatment technologies that are available for various groundwater contaminants.

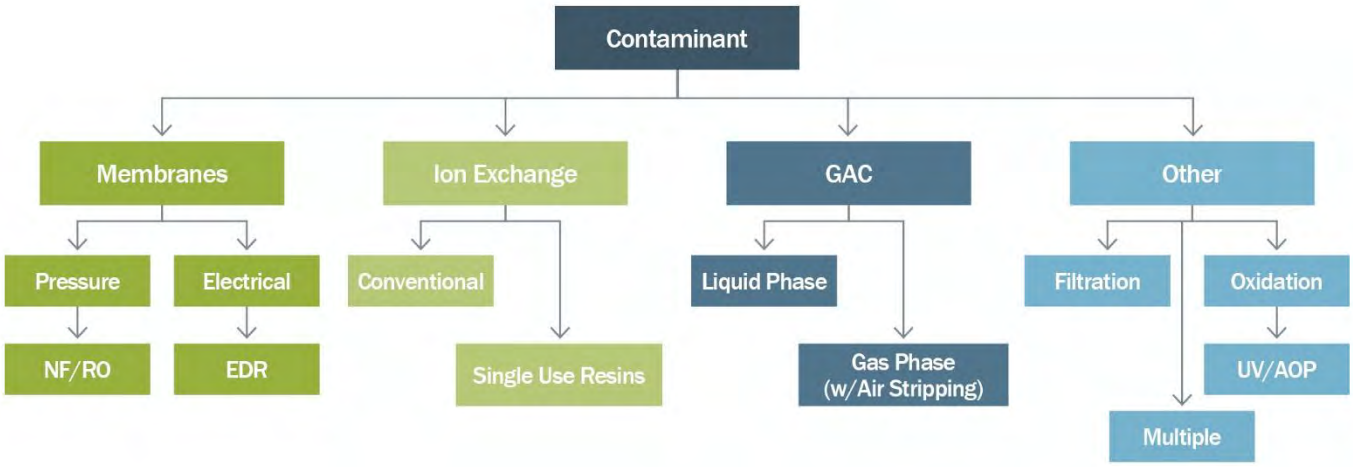

Exhibit 16: The Universe of Conventional Groundwater Contaminant Treatment Options

Membrane processes, especially RO, will remove many contaminants but are limited to higher molecular weight compounds and generally ineffective for the removal of compounds like NDMA and 1,4-dioxane.

Ion exchange, while typically utilized by engineers for the removal of nitrate, perchlorate, hexavalent chromium, and some TDS, will be ineffective at volatile organic carbon (VOC) removal.

GAC is often the treatment option of choice for VOCs but can become a costly option for some poorly absorbed compounds such as 1,2,3-TCP and trichloroethylene (TCE) and will require frequent change outs to meet effluent water quality objectives.

Finally, advanced oxidation processes, such as UV-AOP, are well suited for some difficult to treat compounds like 1,4-dioxane and NDMA but cannot treat compounds such as 1,2,3-TCP and carbon tetrachloride (CTC) without using extremely high UV doses, which will result in significant power consumption.

PFAS, a large class of emerging contaminants including PFOS and PFOA, has been detected in drinking water supplies across the United States and now have notification levels and response levels established in California. GAC or IX are the two main treatment technologies used for PFAS; RO is also effective for PFAS removal, but more expensive to construct and operate.

Table 17 summarizes the efficacy of various treatment processes for different, and common, groundwater contaminants.

Table 17
CANDIDATE TECHNOLOGIES TO REMOVE POSSIBLE CONSTITUENTS OF CONCERN

Constituent	Treatment Technologies							Most Common Processes for this Constituent
	GAC	Air Stripping (A/S) + Vapor Phase GAC	IX	RO	AOPs	Biological (Fixed Bed/ Fluidized Bed)	MBR	
Organic Constituents								
TCE	✔	✔		✔	✔	✔	✔	A/S & GAC
Perchloroethylene (PCE)	✔	✔		✔	✔	✔	✔	A/S & GAC
MTBE	✔				✔	✔	✔	GAC
1,4-dioxane					✔	✔	✔	AOP
NDMA					✔	✔	✔	UV
1,2,3-TCP	✔				✔	✔		GAC
PFAS	✔		✔	✔				GAC/IX
Inorganic Constituents								
Nitrate			✔	✔		✔	✔	IX
Hexavalent Chromium			✔	✔		✔	✔	IX
Perchlorate			✔	✔		✔	✔	IX
Iron								Oxidation & Filtration
Manganese								Oxidation & Filtration

3.10.3 MWD Pump Back

MWD operates three raw water transmission pipelines near the project area shown in **Figure 5** that could all be suitable for MWD Pump Back: Rialto Pipeline, Upper Feeder Pipeline, and Etiwanda Pipeline.

Under normal operation, the Rialto Pipeline delivers raw water from the Devil Canyon Afterbay (which receives water from the East Branch of the State Water Project) westerly to turnouts at the FWC Sandhill WTP, CVWD Lloyd W. Michael WTP, CVWD Royer Nesbit WTP (currently offline), WFA Agua de Lejos WTP, and Three Valleys Municipal Water District (TVMWD) Miramar WTP. The Rialto Pipeline also delivers raw water to various spreading basins for groundwater recharge

in the Cucamonga Basin and northern areas of the Chino Basin. After turnouts to those agencies, the Rialto Pipeline delivers raw water west to the MWD F.E. Weymouth WTP (Weymouth), for ultimate delivery to Los Angeles and Orange Counties.

The Rialto Pipeline is the only appropriate pipeline to pump CBP potable water into in order to keep reclaimed water within the Chino Basin. Since the Rialto Pipeline is a raw water pipeline, the potable water generated by CBP would be considered raw water once pumped into the Rialto Pipeline. There are no MWD treated water pipelines near the proposed extraction wellfield.

TAKE options that include MWD Pump Back will require a pump station to lift extracted groundwater from the elevation of the reservoir at the extraction wellfield (between 1,000 ft and 1,200 ft above mean sea level (AMSL) to the static HGL of the Rialto Pipeline of 1,936 ft AMSL. While the hydraulic grade line (HGL) of the Rialto Pipeline decreases from 1,936 ft AMSL as it flows west due to head-loss, the pump back facilities should be capable of pumping to the Devil Canyon Afterbay static head of 1,936 ft AMSL to maintain operational flexibility. MWD Pump Back will also require a large-diameter pipeline from the extraction wellfield to the Rialto Pipeline, and a new or retrofitted turnout into the Rialto Pipeline

Water Quality Considerations

The extracted groundwater being delivered to the Rialto Pipeline must be of quality not to significantly diminish the quality of existing raw water in the Rialto Pipeline and, per MWD requirements, must meet primary and secondary MCLs. Water quality data from existing production wells near the proposed extraction wellfield in northern MZ-2 were collected to estimate the water quality of extracted CBP groundwater. Likewise, water quality data from the Devil Canyon Afterbay were provided by MWD to represent Rialto Pipeline water quality.

The blended Rialto Pipeline/CBP water quality was calculated using a mass balance based on the maximum annual CBP delivery of 50,000 AFY and typical Rialto Pipeline flow of 614 MGD. The estimated water quality for CBP water, the Rialto Pipeline water quality, and the blended CBP and Rialto Pipeline water quality is presented in **Table 18**.

Table 18
BLENDED WATER QUALITY

Constituent	CBP Blended Extraction Wells[1]	Rialto Pipeline[2]	CBP/Rialto Pipeline Blend[3]	Primary *(Secondary)* MCL
TDS (mg/L)	235.6	254.0	252.8	(*500.0)*
Nitrate-N (mg/L)	3.3	0.4	0.6	10.0
Hardness (mg/L)	146.7	94.0	97.6	-
EC (µS/cm)	3844.4	457.0	452.1	*(900.0)*
pH	7.8	8.1[4]	8.1	-
Calcium (mg/L)	45.1	20.0	21.8	-
Magnesium (mg/L)	7.7	11.0	10.8	-
Sodium (mg/L)	19.6	52.0	49.8	-
Potassium (mg/L)	1.8	N/A	N/A	-
Bicarbonate (mg/L)	178.7	72.0	79.2	-
Chloride (mg/L)	9.4	72.0	67.8	*(250.0)*
Sulfate (mg/L)	15.1	33.0	31.8	*(250.0)*

Constituent	CBP Blended Extraction Wells[1]	Rialto Pipeline[2]	CBP/Rialto Pipeline Blend[3]	Primary *(Secondary)* MCL
Perchlorate (µg/L)	2.4	0[5]	0.2	6.0
Hexavalent Chromium (µg/L)	3.4	0[5]	0.2	10.0[6]

Notes: [1]Based on 5-10 years water quality data of nearby production wells.
[2]Rialto Pipeline water quality assumed to be equivalent to Devil Canyon Afterbay water quality as provided in MWD Bulletin 132-13 from April 2015, Table 4-1.
[3]Calculated by mass balance of typical Rialto Pipeline flowrate (614 MGD) and maximum proposed CBP flowrate (50,000 AFY, 44.64 MGD). CBP water would account for approximately 6.8% of the combined flow.
[4]CVWD LWMWTP Master Plan, October 2010
[5]No data, which suggests that these constituents were not sampled because not typically present in surface water. For this analysis, they were assumed to be zero.
[6]The hexavalent chromium MCL was rescinded but is anticipated to be re-proposed at this same level in the future. Total chromium has an MCL of 60 µg/L.

Table 18 above shows that the projected, blended water quality for the CBP extraction wells is of high quality and, in many cases, the extraction well water quality exceeds that in Rialto Pipeline. The lack of perchlorate and hexavalent chromium data for the Rialto Pipeline suggests that these constituents were not sampled. These constituents are not typically present in surface water and for this analysis it is assumed that they have low or zero concentration in the Rialto Pipeline. The projected levels for the CBP water alone are below the MCL for perchlorate and the assumed future MCL for hexavalent chromium. Considering the significant dilution that will occur in the Rialto Pipeline once the CBP water is pumped in, treatment is not anticipated to be required.

The CBP water would be sampled and monitored at or near the turnout into the Rialto Pipeline. It is anticipated that MWD will provide a list of constituents to be monitored at regular intervals to verify the quality of water being delivered. Constituents to be monitored may include TDS, nitrate, hardness, chloride, sulfate, perchlorate, hexavalent chromium, 1,2,3-TCP, and other contaminants that may present treatment challenges or that have primary and secondary MCLs for drinking water. The frequency of the sampling is unknown at this time.

PFAS

PFAS sampling was completed in 2019 and 2020 and results are forthcoming. The following describe sampling that has been undertaken to date:

- The only sampling completed on Chino Basin groundwater to date was through Unregulated Contaminant Monitoring Rule (UCMR 3), which was for 30 active wells.
- All UCMR3 data showed that all samples were non-detect. However, UCMR3 data was analyzed using older analytical methods with a higher detection limit than the current NLs. Therefore, it is inconclusive as to whether the CBP groundwater will require treatment for PFOA and PFOS.
- The CBWM monitors some wells in Chino Basin and have added PFOA and PFOS sampling to their constituents. The first samples were collected in 2019.
- A couple of drinking water agencies in the Chino Basin area were served sampling orders from DDW and had to start quarterly sampling in June. These agencies are waiting to see data has been uploaded to DDW's online database.
- The CDA started sampling at desalter wells, but data is not yet available.

Operational Considerations

It is assumed that the MWD Pump Back would operate at a constant rate over the entire calendar year and would not vary to meet seasonal demands. The system is anticipated to deliver water at

50,000 AFY (~31,100 GPM) constantly during call years and would not operate during non-call years.

The high-hydraulic grade line (HGL) in the Rialto Pipeline changes as flow varies seasonally so MWD would likely maintain operational control over the pump back conveyance system for more streamlined operation of the pump station with MWD's control system. The interconnection between the MWD Pump Back and the Rialto Pipeline will also include a backflow prevention mechanism to prevent raw water in the Rialto Pipeline from contaminating the potable water in the CBP conveyance system since the MWD Pump Back will not be hydraulically isolated from the In-Lieu CBP system delivering potable water to member agencies.

Water may be delivered back to the Rialto Pipeline either by retrofit of an existing turnout off the Rialto Pipeline, or by a newly constructed tap into the Rialto Pipeline. There is currently one turnout off the Rialto Pipeline that is unused, CB-7, which has an 18-inch diameter and a capacity of approximately 6,944 GPM. Where a maximum pump back flowrate of 10,000 AFY or less to MWD will, pumping back through CB-7 is feasible, or a new connection to the Rialto Pipeline could be installed. All options that require more than 10,000 AFY of pump back to MWD will require construction of a new turnout. A new turnout would likely be placed between connections CB-16 (Lloyd W. Michael WTP) and PM-21 (Miramar WTP) to reduce the length of pipe required between the Rialto Pipeline and the extraction wellfield and/or other potable water distribution facilities.

3.10.4 In-Lieu CBP and In-Lieu Local

CBP water could also be delivered directly to local agencies and used in-lieu of imported water. Member agencies would receive a direct delivery of CBP water for use instead of imported water that originates from the Rialto Pipeline.

- In-Lieu CBP would be water from the extraction wellfield delivered to agencies through a new conveyance system, and
- In-Lieu Local would be water from wellhead treatment on existing wells or new wells delivered using only existing conveyance infrastructure.

TAKE options that include In-Lieu CBP would have a regional conveyance system including pipelines, pump stations, and turnouts and would be owned and operated by IEUA to deliver extracted CBP groundwater from the extraction wellfield to turnouts into the member agencies' distribution systems. Each member agency receiving CBP water will have a direct turnout into their local distribution system, and options requiring member agencies to use existing interconnections to deliver CBP water to other member agencies will be avoided. An effort will be made to design the regional conveyance system to deliver CBP water directly to member agencies in the pressure zone that they currently receive imported water in order to avoid requiring operational changes from shifting water sources. Member agencies may also request their CBP turnout to be in pressure zones in their system with higher demands if it will give them operational flexibility, water supply reliability, and/or relieve some capacity-constrained portions of their system.

Minimum Plant Flows

The amount of CBP water member agencies can receive in-lieu of Rialto Pipeline raw water is limited by the minimum flowrate required to keep each WTP operating reliably. Because In-Lieu Use involves member agencies taking CBP water directly rather than Rialto Pipeline raw water

through their respective WTP, only so much can in-lieu water can be received before demand on the WTPs falls below their minimum acceptable flowrate.

Water Quality Considerations

Extracted groundwater for in-lieu use would need to be of potable quality as it will be delivered directly to member agencies' distribution systems. **Table 16**, above, provides the anticipated quality of extracted groundwater based on samples from existing nearby potable wells in the previous 5 to 10 years. The CBP water is expected to meet primary and secondary MCLs and is assumed to not require treatment prior to delivery into each member agency's system. However, each well will include chlorine for disinfection, and the proposed reservoir at the extraction wellfield will also include chlorine to maintain chlorine residual in the tank and chlorine residual in the regional distribution pipelines.

The WFA Agua de Lejos WTP uses chloramines for disinfection at its WTP, leaving residual chloramine in the WFA distribution system and in its members' systems as well. There may be adverse water quality affects from mixing water with residual chlorine and residual chloramine, such as disinfection byproduct production. If concerns arise from mixing the two types of disinfected water, the disinfection strategy at turnouts from chlorinated regional CBP facilities to local agency systems using chloramine will require evaluation to determine the optimum blending strategy.

Water quality will be monitored in the potable water reservoir near the extraction wellfield. Water will also be sampled at various locations throughout the regional distribution system to ensure that water being delivered to member agencies meets drinking water quality requirements. It is anticipated that agreements will be made between member agencies and IEUA that provides a set of water quality requirements, or that the CBP water deliveries will only be required to meet the primary and secondary MCLs for drinking water.

Operational Considerations

The regional CBP delivery system for In-Lieu CBP, including wells, reservoirs, pump stations, pipes, and turnouts, would be owned and operated by IEUA. The system would primarily operate as a constant flow system, simultaneously pumping, conveying, and delivering groundwater to member agencies at the designated flowrate for either a call year or non-call year. The system would not have the ability to increase production to accommodate increased summertime demands, except in non-call years for options that include pre-delivery, as the average flow rate for the non-call year would be less than the maximum capacity of the conveyance system.

If a well began producing water with a high level of a contaminant that could not be blended out by the rest of the production wells, a redundant well would be operated to make up the water deficit. If a redundant well is unavailable or already producing water, the production of the other well could be increased slightly to make up the deficit of the offline well.

TAKE options that include In-Lieu CBP, i.e., direct deliveries of extracted groundwater in-lieu of imported water to member agencies, will include dedicated pipelines, pump stations, and turnouts owned and operated by IEUA. Turnouts will be metered to track deliveries of CBP water made to member agencies to accurately determine how much water member agencies are using in-lieu of imported water. Like In-Lieu CBP, water deliveries from In-Lieu Local projects would need to be metered to track deliveries of CBP water made to member agencies for accurate accounting.

In-Lieu Local

The In-Lieu Local delivery mechanism involves using either new or existing wells and piping to locally produce groundwater stored by CBP. If existing wells were used for In-Lieu Local, then it was assumed that only existing wells that are currently offline would be considered to exclusively to produce CBP water when they are brought back into service.

In-Lieu Local projects have been incorporated into the CBP, though the specific member agencies that might participate in these projects are unknown. Additionally, the specific locations of the wells within member agency service areas are unknown.

IEUA member agencies have many existing wells that are currently offline that previously extracted potable water from the Chino Basin. The wells are generally not in operation due to the concentrations of constituents such as 1,2,3-TCP, nitrate, PFAS, etc., the concentrations of which exceed the MCL. As such, the CBP assumes that a wellhead treatment facility would be required to reduce the concentration of constituents that degrade water quality to below the MCL for each constituent, and resume operation of the existing wells for potable water usage.

The wellhead treatment system that would be installed to connect the existing wells to the wellhead treatment would utilize a treatment system appropriate to treat the constituents of concern affecting the specific well or group of wells.

This project assumes that up to 9 wells, and up to 3 wellhead treatment systems (averaging 3 wells per treatment systems) could be installed to support the CBP. These wellhead treatment systems are assumed to be capable of treating up to 3,000 AFY per wellhead treatment system or up to 6,000 AFY. The table below outlines the In-Lieu Local assumptions.

Table 19
POTENTIAL IN-LIEU LOCAL
WELL USE AND WELLHEAD TREATMENT FACILITY

Parameter	Description
Wellhead Treatment Facility	
Location	Member Agency, Existing offline Well
Treatment Capacity (Product Water)	Up to 3,000 AFY per wellhead treatment system, maximum of 6,000 AFY assumed to be treated in total
Number of Extraction Wells (existing)	9 total
Brine Conveyance	
Disposal System	Assumed utilization of the IEBL
Disposal Capacity	4,900 gpd per wellhead treatment system
Pipeline Length	Up to 6,800 LF (8-inch)

In-Lieu CBP

Both In-Lieu CBP and MWD pump back involve the direct delivery of CBP water to a member agency or to MWD, respectively, from a dedicated regional potable CBP pipeline. Therefore, they are essentially the same regarding operations and construction of new facilities, the only difference being the location where the CBP water is being delivered. Both delivery mechanisms have three components:

- Groundwater Extraction and Blending, which includes extraction wells, well collector pipelines, and a blending and storage reservoir.

- Delivery to Hydraulic Elevations Above the Blending Reservoir, which includes pump stations, high-hydraulic grade line (HGL) potable water pipelines, and turnouts and in-conduit hydropower facilities (refer to Subsection 3.10.5).
- Delivery to Hydraulic Elevations Below the Blending Reservoir, which includes low-HGL potable water pipelines and turnouts and in-conduit hydropower facilities (refer to Subsection 3.10.6).

3.10.5 Delivery to Hydraulic Elevations Above the Blending Reservoir

Delivery to hydraulic elevations above the blending reservoir includes one or more pump stations, potable water pipelines, and turnouts and hydropower facilities to agencies with HGLs higher than the storage reservoir. The HGL of the Rialto Pipeline, as well as some member agencies pressure zones, is higher than the proposed storage and blending reservoir. To deliver In-Lieu CBP water or MWD pump back water to those pressure zones, a pump station and pressurized pipeline network is required above the reservoir. Coincidentally, the project area is on a south facing slope from the San Gabriel Mountain Range to the north, and all of the delivery locations that are higher in elevation than the proposed reservoir are north of the reservoir as well. The inverse is true that all delivery locations south of the proposed reservoir are lower in elevation than the reservoir.

Agencies that may receive water from the Component B facilities include the following with the HGL of the facility indicated:

- Metropolitan Water District (MWD): Rialto Pipeline – 1,936 ft
- Cucamonga Valley Water District (CVWD): Zone III – 1,658 ft
- Fontana Water Company (FWC): Highland Zone – 1,504 ft
- Water Facilities Authority (WFA): Agua de Lejos WTP Clearwell – 1,632 ft

Pump Stations

TAKE options include the construction of Potable Water Pump Station #1, which is to be located adjacent to the proposed reservoir and would use the reservoir as a forebay to provide suction head. Typically, Pump Station #1 would lift water up to the highest HGL of all of the Component B turnouts (Rialto Pipeline, HGL 1,936 ft). Because all other Component B turnouts are lower than the Rialto Pipeline, this would result in over-pressurizing some water which would require Pressure Reducing Valve (PRV) stations or in-conduit hydropower facilities to reduce the head.

In some options, it is more cost effective to construct a second pump station (Potable Water Pump Station #2) to lift MWD's share of water to the HGL of the Rialto Pipeline (1,936 ft), rather than requiring Pump Station #1 to lift all water in Component B up to 1,936 ft. This was typically done when the allocation of water to MWD was low enough to make the cost of constructing Pump Station #2 lower than the cost of losing energy from over-pressurizing water to every other member agency turnout in Component B. In options with Pump Station #2, Pump Station #1 lifts water to the HGL of the second highest turnout in Component B (CVWD Zone III – 1,658 ft), and Pump Station #2 takes only MWD's share of water and lifts it from 1,658 ft to the Rialto Pipeline HGL. The decision to construct a second pump station would be re-evaluated using a hydraulic model in the preliminary design phase once the preferred TAKE option has been selected.

High HGL Potable Water Pipelines

A potable pipeline network is proposed north of the blending and storage reservoir to deliver water to the agencies and pressure zones listed above under 3.10.5. The primary feature is the northern pipeline, which would comprise pipelines with diameters ranging from 30 and 54 inches and would align from the reservoir north along Milliken Avenue, east along Baseline Road, and north along

Day Creek Boulevard to the general area of the CWWD Lloyd W. Michael WTP. The Lloyd W. Michael WTP is owned and operated by CVWD and is the location of some of CVWD's Zone III tanks. This northern pipeline would supply CVWD Zone III and the MWD Rialto Pipeline.

For options that include delivery to FWC's Highland Zone, a 24-inch pipeline would branch off from the northern pipeline at the intersection of Day Creek Boulevard and Baseline Road and would align East in Baseline Road until reaching FWC's system.

For options that include delivery to WFA, a proposed 36 to 72-inch east-west pipeline would branch off from the northern pipeline at the intersection of Foothill Boulevard and Milliken Avenue. The east-west pipeline would align in Foothill Boulevard until turning North at Mountain Avenue in Upland, then turning west again at 18th Street toward the Agua de Lejos WTP. The east-west pipeline would terminate at its connections to Agua de Lejos. Maps of all potable pipeline alignments are provided with the TAKE options below under 3.10.7, TAKE Facilities Summary.

Turnouts and In-Conduit Hydropower Facilities

MWD would receive delivery of CBP water into the Rialto Pipeline near the Lloyd W. Michael WTP in Rancho Cucamonga (off the northern pipeline). A new turnout would need to be constructed from the regional CBP pipeline into the Rialto Pipeline. The turnout would include a sampling port for monitoring CBP water quality flowing into the Rialto Pipeline, and a backflow prevention device to prevent water from the Rialto Pipeline from entering the CBP pipeline. Because the CBP regional pipeline network is potable and Rialto Pipeline is raw, the Division of Drinking Water would be involved in the permitting of the interconnection between the Rialto Pipeline and the CBP pipeline. Very strict redundancy and safety requirements to ensure the potable pipelines are not contaminated with raw Rialto Pipeline water would be required.

CVWD Zone III would receive delivery of CBP water at the storage tanks on the Lloyd W. Michael WTP site from the northern pipeline. The HGL of the northern pipeline would be 1,936 ft (Rialto Pipeline) in some options, and therefore the turnout to CVWD Zone III may include a PRV station of in-conduit hydropower facility to recapture energy. The CVWD Zone III turnout would include a sampling port to monitor water quality entering CVWD's system.

FWC Highland Zone would receive delivery of CBP water into a transmission main in Baseline Avenue (Baseline becomes "Avenue" East of the Fontana/Rancho Cucamonga city line). The HGL of the Highland Zone is 1,504 ft, and the FWC Highland turnout would always require a PRV station or in-conduit hydropower facility to reduce pressure to the Highland Zone HGL. The FWC Highland turnout would include a sampling port to monitor water quality entering FWC's system.

WFA owns and operates the Agua de Lejos WTP in Upland. The Agua de Lejos WTP has a clear well with a surface elevation of 1,632 ft more than 450,000 people in the west-end of San Bernardino County, and is governed by its member agencies: the City of Chino, the City of Chino Hills, MVWD, the City of Ontario, and the City of Upland. The Agua de Lejos clear well is the ideal location to deliver CBP water because it provides the CBP water in the same location as imported water currently enters their systems. The new system would connect to the Agua de Lejos Clearwell from the proposed east-west pipeline, including a sampling port to monitor water quality entering their systems.

3.10.6 Delivery to Hydraulic Elevations Below the Blending Reservoir

Delivery to hydraulic elevations below the blending reservoir includes the potable water pipelines and turnouts and hydropower facilities to agencies with HGLs lower than the storage reservoir. As such, the CBP proposes a north-south pipeline that would go from the northern portion of IEUA's service area to the southern portion of IEUA's service area. Due to elevation changes, some delivery locations are at HGLs below the proposed reservoir and can receive water via gravity.

Low-HGL Potable Water Pipelines

The southern pipeline would deliver CBP water from the proposed reservoir to IEUA member agencies. The pipeline is anticipated to vary in size between 24 and 36-inches based on the delivery amount to those agencies proposed in each option. The southern pipeline is alignment location has not yet been determined.

Turnouts and In-Conduit Hydropower Facilities

The southern pipeline may require one or more turnouts to reach member agencies. Because of the anticipated high difference in HGL from the proposed reservoir (1,180 ft) to the certain areas within IEUA's service area, it is assumed that an in-conduit hydropower facility may be at one or more turnouts. However, at other locations there is not enough of a difference in head to justify an in-conduit hydropower facility at possible turnout locations.

Sampling ports would be included at all turnouts to monitor water quality entering member agencies' systems.

3.10.7 TAKE Facilities Summary

TAKE-1: 100% pump back with standard delivery

TAKE Option 1 (TAKE-1) includes delivery of 50,000 AFY of CBP water to the Rialto Pipeline during call years, with standard delivery (i.e., no pre-delivery of CBP water during non-call years) and no delivery of CBP water to member agencies for in-lieu. **Table 20** provides the breakdown of CBP water deliveries to MWD and the member agencies during call and non-call years in TAKE-1.

Table 20
TAKE OPTION 1 DELIVERIES TO EACH AGENCY (AFY)

Agency	Call Year	Non-Call Year
Metropolitan Water District	50,000	-
IEUA Member Agencies	-	-
TOTAL	**50,000**	-

Note: [1]Water supplied from the WFA Agua de Lejos WTP.

TAKE Option 1 includes the following facilities, shown on **Figure 6**:

- Component A – Groundwater Extraction and Blending
  - 17 extraction wells
  - 9 miles of 12- to 36-inch collector pipelines
  - 5 MG Storage Tank #1

- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Potable Water Pump Station #1: 9,300 HP, 31,100 gpm firm capacity, 823 ft total dynamic head (TDH)
  - 5 miles of 54-inch potable northern pipeline
  - Proposed 54-inch turnout to the Rialto Pipeline
- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
  - None
- Component D – Delivery to member agencies via In-Lieu Local (Example Projects)
  - None
- Existing Facilities
  - Rialto Pipeline (HGL 1,936 ft)

TAKE Option 1 would be operated to deliver 50,000 AFY to the Rialto Pipeline during call years. Although the facilities would not be operated for Program purposes during non-call years, the infrastructure would be available for local and/or regional uses. The operation of the TAKE-1 components during call years is described below.

- Component A – Groundwater Extraction and Blending
  - The extraction wells, collector pipes, and Storage Tank #1 would extract and blend 50,000 AFY (about 31,100 gpm) of groundwater during call years.
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Storage Tank #1 would serve as a forebay for Potable Water Pump Station #1. During call years, Pump Station #1 would deliver 50,000 AFY of water to the Rialto Pipeline through a proposed 54-inch northern pipeline and a proposed 54-inch turnout into the Rialto Pipeline.

TAKE-3: Partial pump back and partial in-lieu with standard delivery

TAKE Option 3 (TAKE-3) involves the delivery of 50,000 AFY combined during call years to the Rialto Pipeline, five member agencies, and Jurupa Community Services District. Since this option is based on standard delivery, no water would be delivered during non-call years. **Table 21** provides the deliveries to each Agency in TAKE-3.

Table 21
TAKE OPTION 3 DELIVERIES TO EACH AGENCY (AFY)

Agency	Call Year	Non-Call Year
Metropolitan Water District	25,500	-
IEUA Member Agencies	24,500	-
TOTAL	**50,000**	**-**

Note: [1]Water supplied from the WFA Agua de Lejos WTP.

TAKE Option 3 includes construction or use of the following facilities, shown on **Figure 7**:

- Component A – Groundwater Extraction and Blending
  - 15 extraction wells
  - 9 miles of 12- to 42-inch collector pipelines
  - Storage Tank #1: 5 MG and in-conduit hydropower facility
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Potable Water Pump Station #1: 7,000 HP, 23,300 gpm firm capacity, 823 ft TDH
  - 8 miles of 16- through 48-in potable northern pipeline (includes branches to Fontana Water Company (FWC) and Cucamonga Valley Water District (CVWD)

    - Proposed 16-inch turnout to FWC Highland Zone (and optional hydropower facility)
    - Proposed 24-inch turnout to CVWD Zone III (and optional hydropower facility)
    - Proposed 36-inch turnout to the Rialto Pipeline
- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
    - 4 miles of 12- through 24-inch potable southern pipeline
    - Proposed 12-inch turnout to unknown member agency
- Component D – Delivery to member agencies via In-Lieu Local (Example Projects)
    - Up to 6,000 AFY wellhead treatment by 3 wellhead treatment systems treating water pumped from up to existing member agency 9 wells.
- Existing Facilities:
    - Rialto Pipeline (HGL 1,936 ft)
    - Member agency wells

TAKE Option 3 would be operated to deliver 50,000 AFY to the Rialto Pipeline, member agencies, and JCSD during call years only. Although the facilities would not be operated for Program purposes during non-call years, the infrastructure would be available for local and/or regional uses. The operation of the TAKE-3 components would be as follows:

- Component A – Groundwater Extraction and Blending
    - The extraction wells, collector pipes, and Storage Tank #1 would extract and blend 44,000 AFY (about 27,300 gpm) of groundwater during call years.
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
    - Storage Tank #1 would serve as a forebay for Potable Water Pump Station #1. During call years, Pump Station #1 would deliver 37,500 AFY combined of water to the Rialto Pipeline, CVWD Zone III, and FWC Highland Zone through the proposed 7.1-mile northern pipeline network and turnouts to all three agencies.
- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
    - Potable Water Pump Station #1 is designed to lift water to an HGL of 1,936 ft to be able to deliver to the Rialto Pipeline. CVWD and FWC, who would both receive water from Pump Station #1, are at HGLs much lower than 1,936 ft. To recapture some of the lost energy from over-pumping, in-conduit hydropower facilities are proposed at both the CVWD and FWC turnouts. Preliminary calculations showed that the energy loss from over-pumping and recovering energy from hydropower facilities is less costly than the expense of constructing two additional pump stations designed to deliver water exactly to the HGLs of CVWD and FWC (1,658 ft and 1,504 ft, respectively).
    - Water would flow by gravity from north to south in a pipeline with a size between X" and X"; The volume of water that would flow by gravity under this option is anticipated to be 6,500 AFY of water. Water would flow by gravity from Storage Tank #1 South to turnouts to member agencies along a proposed 24-inch southern pipeline. Coming from an HGL of 1,180 in Storage Tank #1, an in-conduit hydropower facility may be appropriate at some turnout locations, but not at others.
- Component D – Delivery to member agencies via In-Lieu Local (Example Projects)
    - The remaining 6,000 AFY would be delivered to member agencies via In-Lieu Local and groundwater treatment. TAKE Option 3 proposes up to three new groundwater treatment facilities for member agencies that would enable reactivation of local wells currently offline due to water quality. These facilities would produce up to 3,000 AFY of potable supply which they would use in-lieu of MWD Rialto Pipeline Water. Existing infrastructure would be utilized to convey treated groundwater throughout their distribution systems to their customers. The Program would help fund these facilities in exchange for in-lieu participation.

TAKE-7: Partial pump back and partial in-lieu

TAKE Option 7 (TAKE-7) involves the delivery of 50,000 AFY combined during call years to the Rialto Pipeline, WFA, CVWD, and FWC. **Table 22** provides the deliveries to each agency for TAKE-7.

Table 22
TAKE OPTION 7 DELIVERIES TO EACH AGENCY (AFY)

Agency	Call Year	Non-Call Year
Metropolitan Water District	28,0000	
IEUA Member Agencies	22,000	-
TOTAL	**50,000**	

Notes: [1]Water supplied from the WFA Agua de Lejos WTP.

TAKE Option 7 includes construction or use of the following facilities, shown on **Figure 8**:

- Component A – Groundwater Extraction and Blending
  - 9 extraction wells
  - 6 miles of 12- to 36-inch collector pipelines
  - 5 MG Storage Tank #1
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - 8 miles of 12- to 36-inch northern pipeline
  - Proposed 12-inch turnout to FWC Highland Zone
  - Proposed 12-inch turnout to CVWD Zone III
  - Proposed 54- to 72-inch turnout to the Rialto Pipeline
  - 9 miles of 36- to 72-inch east-west pipeline
  - Proposed 36-inch turnout to Agua de Lejos clear well (WFA)
  - WFA Booster Pump Station at 1,700 HP
  - FWC Booster Pump Station at 300 HP
  - CVWD/MWD Booster Pump Station at 4,800 HP
- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
  - None
- Component D – Delivery to member agencies via In-Lieu Local (Example Projects)
  - None
- Existing Facilities
  - Rialto Pipeline (HGL 1,936 ft)
  - Member agency wells
  - Agua de Lejos WTP Clearwell (HGL 1,632 ft)
  - Lloyd Michaels WTP Clearwell (HGL 1,658 ft)
  - FWC Highland Zone (HGL 1,504 ft).

All facilities in TAKE Option 7 would be operated to deliver 50,000 AFY to the Rialto Pipeline and member agencies, during call years. The following discusses call year operation.

- Component A – Groundwater Extraction and Blending
  - The extraction wells, collector pipes, and Storage Tank #1 would extract and blend 50,000 AFY (about 31,000 gpm) of groundwater.
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Storage Tank #1 would serve as a forebay for Potable Water Pump Station #1, #2 and #3. Pump Station #1 would deliver 36,000 AFY combined of water to the Rialto

Pipeline and to CVWD Zone III (HGL 1,658 ft). Pump Station #2 would deliver 4,000 AFY of water to FWC Highland Zone (HGL 1,504). Pump Station #3 would deliver 10,000 AFY of water to WFA Agua de Lejos clear well (HGL 1,632 ft) through the east-west pipelines network, and four turnouts.

TAKE-8: Partial pump back and partial in-lieu

TAKE Option 8 (TAKE-8) involves the delivery of 40,000 AFY of CBP water to all MWD, CVWD and FWC during call years. **Table 23** provides the deliveries to each agency for TAKE-8.

Table 23
TAKE OPTION 8 DELIVERIES TO EACH AGENCY (TAFY)

Agency	Call Year	Non-Call Year
Metropolitan Water District	10,000	-
CVWD and FWC	30,000	
TOTAL	**40,000**	

Note: [1]Water supplied from the WFA Agua de Lejos WTP.

TAKE Option 8 includes construction or use of the following facilities, shown on **Figure 9**:

- Component A – Groundwater Extraction and Blending
  - 17 extraction wells
  - 6 miles of 12- to 36-inch collector pipelines
  - 5 MG Storage Tank #1
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Potable Water Pump Station #1: 5,300 HP, 11,300 gpm firm capacity, 558 ft TDH
  - MWD Booster Pump Station: 650 HP
  - 6.3 miles of 48-inch northern pipeline
  - Proposed 24-inch turnout to FWC Highland Zone
  - Proposed 48-inch turnout to CVWD Zone III
  - Proposed 24-inch turnout to Rialto Pipeline
- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
  - 2 miles of 36-inch potable southern pipeline
  - 0.7 miles of 24-inch potable pipeline to FWC Jupiter Zone F17 Tank (HGL 1,103 ft)
- Component D – Delivery to member agencies via In-Lieu Local (Example Projects)
  - None
- Existing Facilities
  - Member agency wells

All facilities in TAKE Option 8 would be operated to deliver 40,000 AFY to the Rialto Pipeline, CVWD, and FWC during call years. The facilities would operate as a complete in-lieu to deliver 30,000 AFY to CVWD and FWC. The following discusses call year operation. The operation of the TAKE-8 components would be as follows:

- Component A – Groundwater Extraction and Blending
  - The extraction wells, collector pipes, and Storage Tank #1 would extract and blend 50,000 AFY (about 31,000 gpm) of groundwater.
- Component B – Delivery to Hydraulic Elevations Above the Blending Reservoir
  - Storage Tank #1 would serve as a forebay for Potable Water Pump Station #1. Pump Station #1 would deliver 40,000 AFY combined of water to Rialto Pipeline,

CVWD Zone III, FWC Highland Zone, through a proposed network of 24- to 48-inch pipelines.

- Component C – Delivery to Hydraulic Elevations Below the Blending Reservoir
    - Water would flow by gravity from north to south in a pipeline with a size between 24- and 36-inch; The volume of water that would flow by gravity under this option is anticipated to be 5,000 AFY of water would flow by gravity from Storage Tank #1 South to turnout to FWC's Jupiter Zone F17 tank member agencies along a proposed 24-inch southern pipeline. Coming from an HGL of 1,100 in Storage Tank #1, an in-conduit hydropower facility may be appropriate at some turnout locations, but not at others.

3.11 CHINO BASIN PROGRAM CONVEYANCE FACILITIES

This section presents the conveyance approach and assumptions for both the PUT and TAKE options. This section includes:

- General criteria and alignment assumptions
- Recycled water conveyances
- Purified water conveyance
- Brine conveyance
- Potable water conveyance

Note that some conveyance facilities are discussed under the Subsections 3.9, Chino Basin Program PUT Facilities and 3.10 Chino Basin Program TAKE Facilities; however, these facilities are summarized below for continuity under conveyance facilities.

3.11.1 General Criteria and Alignment Assumptions

In general, all proposed conveyance pipelines will be aligned through the public Right-of-Way (ROW) and properties owned or to-be acquired by IEUA to reduce the number of easements required for construction and maintenance. Parallel alignments through ROWs governed by the California Department of Transportation (Caltrans) will also be avoided (though not excluded from consideration) to reduce permitting efforts. Constructing in areas requiring additional permitting will be considered to avoid known utility conflicts and/or narrow segments of road, or to shorten the length of the overall alignment.

Many existing utilities could conflict with proposed conveyance pipelines, potentially leading to increases in construction time and cost. It is assumed that each stretch of public ROW will include at least one local water main and services, one local sewer main and laterals, local communication and electricity facilities in a duct bank, and one local gas distribution main and services. In addition, regional facilities have been mapped in to **Figure 10** identify larger utility conflicts, including the following:

- Large water transmission mains operated by MWD, San Gabriel Valley Municipal Water District, and CDA
- IEUA sewer trunk lines and force mains
- IEUA recycled water pipelines fuel transmission lines
- Groundwater recharge basins
- Natural gas transmission and distribution pipelines

- Regional brine transmission lines
- Regional storm drainage facilities
- Properties owned by the Southern California Edison Company (Edison)

While avoiding all utility conflicts is not feasible, all conveyance pipelines will be aligned to avoid known parallel utility conflicts with as many existing regional utility facilities as possible. Pipelines may be aligned through utility conflicts if alternatives to avoid utilities require excessive increases in pipe length, excessive segments that require horizontal directional drilling to construct, or acquisition of easements that are considered more costly and challenging than avoiding the utility. Lots owned by Edison that cannot be purchased outright by IEUA are also not being considered due to Edison's "No Permanent Facility" clause in its Transmission Line Right of Way Constraints and Guidelines.

3.11.2 Tertiary Recycled Water Conveyance

IEUA owns and operates a recycled water distribution system with five pressure zones to serve recycled water customers and deliver recycled water to recharge basins for groundwater replenishment. The proposed AWPFs are to be placed along existing recycled water mains; therefore, no additional recycled water facilities will be required to move recycled water from IEUA's existing system to the AWPFs. However, due to the demand of the AWPFs on the existing recycled water system, IEUA will be receiving additional supply from Rialto WWTP and WRCRWA. Both new recycled water supply sources will require a pump station and pipeline to connect into the existing recycled water system. The assumptions and criteria for these recycled water pipelines and pump stations are listed below and in **Table 24**, below.

- Total dynamic head (TDH) required of pump stations to pump water into the existing recycled water system was calculated by the existing hydraulic model
    - The existing model uses the Hazen Williams equation used to determine friction head loss within pipelines
- Trenchless technologies will be required at freeway, flood channel, and railroad crossings
    - Jack and bore for lengths less than 500 feet
    - Horizontal directional drilling for lengths exceeding 500 feet

Table 24
TERTIARY RECYCLED WATER PUMP STATION AND PIPELINE DESIGN CRITERIA AND PLANNING ASSUMPTIONS

Parameter	Criteria	Units	Demand Condition
Maximum System Velocity	5	fps	Constant Flow
Pipe Material, Diameter ≥ 16 in	Steel	-	-
Pipe Material, Diameter < 16 in	Unspecified	-	-
Hazen Williams Coefficient	120	-	-
Minor Losses (% of friction losses) (bends, valves, etc.)	5	%	-
Low water level plant and booster pump stations	20 ft below grade	-	-
Motor Efficiency	75	%	-
Pump Efficiency	93	%	-
Total Pump Station Efficiency	70	%	-

Purified Recycled Water Pipeline Alignment Assumptions

Connection from the Rialto WWTP
The connection from the Rialto WWTP is assumed to connect to IEUA's recycled water system near RP-4 within the 1158 pressure zone (HGL 1158 ft, typically). In scenarios with the AWPF located at RP-4, the pipeline connection from the Rialto WWTP will directly feed the AWPF. In order to make the connection near RP-4, the supply pipeline is required to cross the Union Pacific Railroad and Interstate 10. It is assumed that the pipeline will require jack-and-bore to cross both the railway and the freeway.

Connection from Western Riverside County Regional Wastewater Authority (WRCRWA)
The connection from WRCRWA to the IEUA recycled water system is assumed to connect within the 930-pressure zone near the 930/800 pressure reducing valve. This connection will allow the supplemental supply from WRCRWA to offset demands in the southern pressure zones where the highest agricultural demands exist and make available IEUA supply normally used to meet these demands to feed the AWPF. Due to limitation in how water can move between pressure zones, a connection to the 800-pressure zone would not allow for a maximum benefit of the new supply source. A connection within the 1158 pressure zone would allow the new supply to directly feed the AWPF if located near RP-1, but will also require about two additional miles of pipeline than a connection to the 930-pressure zone, making this connection cost prohibitive.

3.11.3 Recycled Water Conveyance

The purified water distribution system consists of pump stations and pipelines. The treatment plant pump stations deliver water to injection wells and lower elevation recharge basins. Additional booster pump stations are required to deliver purified water to higher elevations and more distant recharge basins.

Pipelines
Purified water would be routed from the AWPF's located at RP-4 to injection wells located within the Chino Basin. Pipeline design criteria established for the purified water system in addition to the overall pipeline design criteria (**Table 24**) are shown in **Table 25**.

- Hazen Williams equation used to determine friction head loss within pipelines
- Trenchless technologies will be required at freeway, flood channel, and railroad crossings
    - Jack and bore for lengths less than 500 feet
    - Horizontal directional drilling for lengths exceeding 500 feet
- Pressure reducing valves will be included at each injection well to decrease head to the required residual pressure to feed the wells.

Table 25
PURIFIED RECYCLED WATER PIPELINE DESIGN CRITERIA AND PLANNING ASSUMPTIONS

Parameter	Criteria	Units	Demand Condition
Hazen Williams Coefficient	120	-	-
Maximum System Velocity	5	fps	Constant Flow
Pipe Material	Steel	-	-
Minor Losses (bends, valves, etc.)	5	%	-
Residual Head required at Injection Wells	10	psi	-

Parameter	Criteria	Units	Demand Condition
Low water level plant and booster pump stations	20 ft below grade	-	-
Motor Efficiency	75	%	
Pump Efficiency	93	%	
Total Pump Station Efficiency	70	%	-

Pump Stations

The proposed conveyance routings will require pump stations to deliver water to the injection wells in the event that an option including the recharge basins is selected. Only one pump station would be required to pump water from the AWPF to the conveyance pipeline to the injection wells. Design criteria for these pump stations is included in **Table 25**.

If a PUT option is developed that includes using recharge basins for groundwater replenishment of purified water, an additional pump station would be required to convey purified water to the northern recharge basins including Lower Day, Etiwanda Debris, and San Sevaine. The purified water conveyance system could be extended from the injection wells to Victoria, Hickory, and Banana recharge basins without an additional pump station (i.e., the purified water pump station could pump to the injection wells and these three recharge basins).

3.11.4 Brine Conveyance

RO concentrate created at IEUA's RP-4 AWPF and brine concentrate from the example In-Lieu Local project for the City of Chino Hills wellhead treatment facility will be disposed of into the existing NRWS via the nearest existing manhole. The following assumptions were made to complete this phase of design:

- Hazen Williams equation used to determine friction head loss within pipelines
- RO concentrate will have sufficient pressure to deliver water from treatment plant to brine line discharge
- Jack and bore required at freeway crossings

Table 26
BRINE PIPELINE DESIGN CRITERIA AND PLANNING ASSUMPTIONS

Parameter	Criteria	Units	Demand Condition
Hazen Williams Coefficient	120	-	-
Maximum System Velocity	5	fps	Constant Flow
Pipe Material	High Density Poly Ethylene (HDPE)	-	-
Minor Losses (bends, valves, etc.)	5	%	-

Pipelines

The RP-1 brine pipeline connection will connect into the NRWS pipeline via a pipeline parallel to the recycled water conveyance line also exiting the plant. The HDPE brine line will require one jack-and-bore trenchless crossing under the 60 freeway.

The RP-4 brine pipeline will connect into the NRWS pipeline via a pipeline on the southeastern side of the existing facility. No trenchless crossings are required for this pipeline.

The brine pipeline for the example In-Lieu Local project included for the City of Chino Hills wellhead treatment facility would connect into the IEBL via a pipeline on the southern side of the facility. The HDPE brine line would require one jack and bore trenchless crossing under the 71 Highway and Chino Creek.

Table 27
RP-4 BRINE PIPELINE DESIGN CRITERIA AND PLANNING ASSUMPTIONS

Parameter	Diameter (in)	Approximate Length (ft)	Maximum Elevation (ft)
RP-4 Brine Line	8	1,400	1,084

AWPF at RP-4

For a product water capacity of 15 TAFY, approximately 1.03 MGD of brine concentrate will require disposal. The elements of the proposed connection are as follows:

- Connection
  - Brine concentrate will be conveyed through a 1,400-foot 8-inch HDPE brine line using residual pressure from the RO system. The residual pressure is projected to be a maximum of 80 psi and would be reduced using a control valve. It is assumed that the brine concentrate would be discharged from an RO concentrate air gap.
  - The new brine line would exit the southeast side of the AWPF and connect to existing manhole EINL- 008 on the NRWS pipeline, located on Etiwanda Avenue between Wells Street and 6th Street.
  - No trenchless crossings would be required for this brine line.
- Capacity
  - At the proposed connection, the existing NRWS pipeline is a 15-inch vitrified clay pipe (VCP) with a capacity of 7.1 cfs (4.6 MGD).
  - The current flow at this location is 20,000 gallons per day (gpd) and the purchased capacity is 21,600 gpd.
  - It has been verified that the existing NRWS infrastructure would be able to accommodate the brine stream at the point of connection and downstream.
  - 2,603 NRWS CUs would need to be purchased
- Hydraulics
  - At the proposed connection, flow would transition from pressurized to gravity.

The brine disposal for the AWPF at RP-4 is summarized in **Table 28** and shown in **Figure 11**.

Table 28
RP-4 AWPF BRINE FACILITIES

Parameter	Description
Brine Stream Characteristics	
Flow	1,027,300 gpd
Chemical Oxygen Demand (COD)[3]	262 ppd[1], dry
Total Suspended Solids (TSS)[3]	1 ppd, dry
Connection	
Disposal System	NRWS Pipeline
Pipeline	1,400 ft (8-inch)
No. of Crossings	None

Parameter	Description
NRWS CUs Required	2,603
Capacity	
NRWS Pipeline Capacity	4.6 MGD (15-inch)
Current Flow	20,000 gpd
Purchased Capacity	21,600 gpd
Hydraulics	
Design Velocity	5 fps[2]

Notes: [1]ppd = pounds per day
[2]fps: feet per second
[3]Values are estimates

New IEBL Connection

The CBP may include groundwater wellhead treatment facilities that could generate brine. Two example In-Lieu Local projects were included in the TAKE options for the City of Chino Hills and the City of Chino. The City of Chino Hills wellhead treatment facility would require a new connection to the IEBL. **Table 29** provides a summary of the proposed example In-Lieu Local project for the City of Chino Hills and the corresponding product water capacity for each TAKE option.

Table 29
CBP TAKE OPTION WELLHEAD TREATMENT FACILITY CAPACITY

TAKE 1	TAKE 3	TAKE 7	TAKE 8
-	6,000 AFY	-	-

CBP TAKE Option 3, assume that one of the wellhead treatment facilities is located at the City of Chino Hills Booster 9. For a product water capacity of 3,000 AFY, approximately 4,900 gpd of brine concentrate will require disposal. The size and alignment for the proposed brine line is the same for TAKE Option 3. The elements of the proposed connection are as follows:

- Connection
  - Brine concentrate would be conveyed through a 6,800-foot 8-inch HDPE brine line.
  - The new brine line would exit the south side of the facility and connect to existing manhole SST-018 on the IEBL, located at the intersection of Eucalyptus Avenue and Monte Vista Avenue.
  - To cross the 71 Highway and Chino Creek, approximately 300 feet of the brine line would need to be installed using jack and bore.
- Capacity
  - At the proposed connection, the existing IEBL pipeline is a 12-inch VCP with a capacity of 3.5 CFS (2.3 mgd).
  - The current flow at this location is 22,000 gpd and the purchased capacity is 43,000 gpd.
  - It has been verified that the existing IEBL infrastructure would be able to accommodate the brine stream at the point of connection and downstream.
  - One Agency Capacity Unit (CU) would need to be purchased for TAKE Options 3, 4c, and 6b.

- Hydraulics
    - Constant flow through the brine line is not feasible since a very small pipe diameter is needed to meet the velocity design criteria. To promote full pipe flow, a pressure sustaining valve is recommended at the connection to the IEBL.
    - At the proposed connection, flow will transition from pressurized to gravity.

The brine disposal for the City of Chino Hills wellhead example In-Lieu Local project is summarized in **Table 30** and shown in **Figure 12**.

Table 30
EXAMPLE IN-LIEU LOCAL PROJECT (CITY OF CHINO HILLS WELLHEAD TREATMENT FACILITY) BRINE DISPOSAL

Parameter	Description
Brine Stream Characteristics	
Flow	4,900 gpd
COD[1]	10 ppd, dry
TSS[1]	1 ppd, dry
Connection	
Disposal System	IEBL
Pipeline	6,800 ft (8-inch)
No. of Crossings	1 (Jack and bore 300 ft beneath Highway 71 and Chino Creek)
NRWS CUs Required	1
Capacity	
NRWS Pipeline Capacity	1.9 MGD
Current Flow	22,000 gpd
Purchased Capacity	43,000 gpd
Hydraulics	
Design Velocity	5 fps

Notes: [1]Values are estimated

Scaling Prevention and Mitigation Strategies

Scaling occurs when minerals precipitate out of a liquid stream and form deposits on surfaces within treatment processes or downstream distribution systems. Calcium carbonate and sulfate scales are the most common types of scale resulting from RO and IX systems. If not properly managed, scale can reduce capacity, cause water quality fluctuations, diminish treatment results, or lead to failure of piping and equipment. For applications susceptible to scaling, a water quality analysis should be performed, and an action plan implemented to minimize the effects of scaling on the system.

The scaling process starts with nucleation, which is the early stages of crystal formation. Subsequent crystal formation will quicken once nucleation has started. Nucleation can only occur in saturated or supersaturated solutions. There are two types of nucleation:

- Homogenous nucleation
    - Crystal growth within a solution. Clusters of ions, known as seed crystals, can form and grow until they are large enough to precipitate out of the solution, forming scale deposits.

  - More likely to occur as the degree of supersaturation increases.
  - Typically prevented by adding scale inhibitors (inhibits nucleation), distorting agents (alters and weakens crystal structure), and dispersants (cause crystals to repel each other).
- Heterogenous nucleation
  - Crystal growth on an existing surface. The interaction between the solution and the existing surface will form seed crystals and lead to scale deposits.
  - More likely to occur at irregularities on the existing surface such as pipe joints, defects, valves, and meters.
  - Typically prevented by altering the physical properties of the piping or equipment. Minimizing homogenous nucleation will also reduce heterogenous nucleation by maintaining a smoother pipe free of scale deposits.

RO systems typically inject scale inhibitors upstream of the treatment process to facilitate a higher recovery rate; thus, it is expected that the brine concentrate from the proposed AWPF(s) would be supersaturated. Brine concentrate from the IX system at the City of Chino Hills wellhead treatment facility is expected to be saturated since scale inhibitors are typically not injected upstream of the treatment process.

Table 31
FACTORS AFFECTING SCALING POTENTIAL

Parameter	Description	Mitigation Strategy
Treatment Recovery Rate	For RO systems, higher recovery rates will lead to brine with higher salt concentrations since less water is wasted.	Confirm that anti-scalant residuals are present in RO system brines.
Degree of Saturation	Higher degrees of saturation will increase the rate of homogenous and heterogenous nucleation.	Inject scale inhibitors or dispersants to prevent crystal growth, or inject distorting agents so that scale is easier to clean.
pH	The solubility of carbonate increases with acidity.	Lower the pH to reduce the scaling potential in the brine line (through chemical injection)
Alkalinity	Results from the presence of hydroxides, carbonates, and bicarbonates.	Reduce the alkalinity to directly reduce the scaling potential (acid addition).
Physical Properties of Interacting Surfaces	Roughness, shape, and material of the piping or equipment can catalyze heterogenous nucleation	Select materials resistant to scale, minimize irregularities, and frequently perform maintenance.
Flow Regime	Free water surfaces will lead to scaling at the interacting surface. Free water surfaces will also experience evaporation, causing the salt concentration to increase.	Brine conveyance pipelines should be designed to promote full pipe flow.

Conclusion

Heterogenous nucleation is more likely to occur than homogenous nucleation in brine conveyance pipelines. The most economical strategies for preventing scale are physical properties and flow regime. The following should be considered:

- HDPE is recommended because the pipe interior is smooth.
- The fusion-weld beads resulting from HDPE installation should be removed from the interior using a mandrel.

- The pipeline design should promote full-pipe flow. Air release valves are likely needed and should be easily accessible and resistant to scale. To promote full-pipe flow, a pressure sustaining valve could be used at the connection to the North NRWS or IEBL.
- The velocity should not exceed 5 fps because turbulent flow will induce scaling.

Chemical treatment and pH adjustment should also be considered. Since RO systems utilize scale inhibitor upstream of the process, it is a feasible option to inject additional scale inhibitor into the brine concentrate leaving the system. Since IX systems do not utilize scale inhibitors, it would be more economical to inject sulfuric acid into the brine concentrate to dissolve calcium carbonate by suppressing the pH. A water quality analysis for the brine concentrate is recommended to determine the optimal strategy to prevent scaling.

It is recommended that the brine lines are inspected regularly as a preventive measure. If scale formation is detected, then cleaning through chemical treatment (acid) should be undertaken before scaling becomes extensive. Long radius bends should be installed to facilitate pipe pigging in the future, if required. Additionally, installing parallel brine lines at each facility is recommended to allow for continuous operation during maintenance. The second brine line would be drained and flushed when not in use.

3.11.5 Potable Water Conveyance

The potable water conveyance system will consist of extraction wells, a reservoir, pump stations, pipelines, and turnouts to member agencies and/or MWD. In general, the extraction wellfield will deliver potable water to a reservoir which will be used for blending and to break head between high and low HGL zones where potable water will be delivered. The reservoir will have two outlets – one directly into a proposed transmission main to deliver water to lower HGL member agencies, and one into the suction side of a proposed potable booster pump station to deliver water to higher HGL member agencies and/or into the Rialto Pipeline.

Pipelines and Pump Stations

For TAKE options that include both MWD Pump Back and In-Lieu CBP, regional potable water facilities will be joined and used for both purposes to reduce costs. For instance, if water is to be pumped back to MWD at CB-7 and also delivered to CVWD at the Lloyd W. Michael WTP (about a half mile away from CB-7), a single pump station and pipeline with capacity for both deliveries would be installed to convey water from the extraction wellfield to the general area near CB-7 and Lloyd W. Michael WTP at which point the pipeline would diverge to two smaller diameter pipelines to deliver water to each turnout.

The assumptions and criteria for the potable water pipelines and pump stations are listed below and in **Table 32**.

- Hazen Williams equation used to determine friction head loss within pipelines
- Pump suction side HGL set to 10 ft above ground elevation for pump stations with an open-atmosphere forebay
- Trenchless technologies will be required at freeway, flood channel, and railroad crossings
    - Jack and bore for lengths less than 500 feet
    - Horizontal directional drilling for lengths exceeding 500 feet
- For pre-delivery TAKE options, pump stations and pipelines are sized based on their call year design flowrate.

Table 32
POTABLE WATER PIPELINE AND PUMP STATION DESIGN CRITERIA AND PLANNING ASSUMPTIONS

Parameter	Criteria	Units	Demand Condition
Maximum System Velocity	5	fps	Constant Flow
Pipe Material, Diameter ≥ 16 in	Steel	-	-
Pipe Material, Diameter < 16 in	Unspecified	-	-
Hazen Williams Coefficient	120		-
Minor Losses (% of friction losses) (bends, valves, etc.)	5	%	-
Motor Efficiency	75	%	
Pump Efficiency	93	%	
Total Pump Station Efficiency	70	%	-

In-Conduit Hydropower Facilities

In-conduit hydropower facilities may be considered in locations of the potable water distribution system where the system pressure needs to be reduced and energy can be produced. Due to the various pressure zones that the regional potable system will be pumping into, it is likely that in some cases a single pump station may deliver water to multiple local pressure zones with different HGLs, and in-conduit hydropower facilities may be appropriate to recapture some of the energy used to lift the water to the higher HGL. This would only be appropriate where the energy loss from pumping water to an HGL and then attempting to recover it with a hydropower facility would be less costly than to build a second pump station and pipeline to deliver water to the lower HGL without any unnecessary additional lift.

Locations ideal for in-conduit hydropower generations should have an available pressure between 25 and 260 psi. The power output at the facility will depend on the available head and flow rate. Three types of in-line hydropower facilities were identified for the CBP:

1. Pump Turbines. A pump turbine is a centrifugal pump running in reverse and is a typically used in small output applications less than 300 kW. Economically, these start to make sense with a minimum power output of 50 kW. They work best with stable and relatively constant flow rates.
2. In-line Francis Turbines. Francis type turbines are the most widely used in-line hydraulic turbines. In-line Francis Turbines can be dropped into an existing PRV location. Unlike pump turbines, Francis Turbines can operate over a wide flow range. These typically have an efficiency of 70-75%. Economically, installation of a Francis Turbine makes sense in locations that can generate 150 kW or greater.
3. Custom Francis Turbines. A custom Francis Turbine has a higher efficiency, typically 80-85%, and are generally installed in locations that can produce much high power 500 kW or greater. These can also cover a wide range in flow.

Under the Federal Power Act, non-federal hydropower resources are regulated under the Federal Energy Regulatory Commission (FERC). FERC issues three types of authorizations: conduit exemptions, 10-megawatt exemptions, and licenses. FERC approval is required to construct and operate small/low-impact hydropower projects while assuring adequate protection of environmental resources. The FERC Small/Low Impact Hydropower Projects program is intended for

small projects that would results in minor environmental effects, such as projects that involve little change to water flow and use and are unlikely to affect threatened and endangered species. The CBP would likely be classified as a small/low-impact hydropower project or would qualify for a conduit exemption as all proposed hydropower generation would be from in-conduit turbines.

Blending and Storage Reservoir

A single reservoir is proposed near the extraction wellfield to allow for blending of groundwater and serve as a forebay for the pump station. The proposed reservoir near the extraction wellfield should provide a retention time of approximately three hours from the extraction wellfield for adequate blending. The reservoir was sized at 5 MG for TAKE options.

The location for a potential reservoir site was determined through identifying land in the Chino Basin near the extraction wellfield suitable for reservoir construction. A GIS shapefile of parcels in San Bernardino County provided by the Assessor's Office was used to identify potential reservoir sites with the following attributes for use in developing the TAKE options:

- Undeveloped parcels.
- Parcels located at the intersection of streets. These sites would provide for easy access to the site during construction, maintenance, and rehabilitation activities.
- Parcels greater than one acre for a 2.5-MG reservoir and greater than 1.75 acres for 5-MG reservoir.
- Parcels not planned for development (such as the former Empire Lakes Golf Course site).
- Parcels with a vacant land use designation.

3.12 SUMMARY OF FACILITY CONSTRUCTION AND OPERATIONS

The CBP would, as stated under Subsection 3.4, Program Objectives, be developed to provide flexibility to regional and local water operations, particularly during future extended droughts expected as climate change continues to impact California. The Program would enhance both the SWP and the Central Valley Project for the betterment of operations, environment, resilience, and reliability. This section of the Project Description is intended to outline operational and construction scenarios for the specific types of facilities and/or improvements that could result from the implementation of the CMP.

The implementation of the facilities proposed as part of the CBP consists of construction and operation of the various facilities that will be summarized below. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development (Injection wells, extraction wells, etc.); (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Groundwater Storage Increase; and, (4) Project Category 4: Advanced Water Purification Facility and Other Water Treatment Facilities. Below are general descriptions of the facilities and operations proposed as part of the CBP. The Project Categories below each reflect a combination of the TAKE Options, as IEUA is considering four TAKE Options—TAKE 1, TAKE 3, TAKE 7, and TAKE 8—in combination with PUT Option 5. Each Project Category has been formed utilizing the greatest number, intensity, lengths, and capacities for each type of facility proposed under the TAKE options. For example, the pipeline lengths and sizes considered under Project Category 2 represent the option(s) that would require the greatest pipeline length to achieve that "Component" of the CBP.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

The CBP would ultimately install several wells and utilize one or up to four existing wells in order to facilitate project operation as follows:

- 16 injection wells (12 duty, 4 standby)
- The CBP would install a maximum of 17 extraction wells.
- 4 monitoring wells
- Use of existing wells including the following:
    - Use of existing Rialto Pipeline
    - Use of up to 9 existing member agency wells
    - Use of existing Agua de Lejos WTP Clearwell (HGL 1,632 ft)
    - Use of existing Lloyd Michael WTP Clearwell

Project Category 2: Conveyance Facilities and Ancillary Facilities

The CBP would ultimately install a total of about 30 miles or 158,400 lineal feet (LF) of various types of pipelines. Potential alignments include a mix of the following:

- TAKE 1: 9 miles of 12- to 36-inch collector pipelines
- TAKE 1: 5 miles of 54-inch potable northern pipeline
- TAKE 3: 9 miles of 12- to 42-inch collector pipelines
- TAKE 3: 8 miles of 16- through 48-in potable northern pipeline
- TAKE 3: 4 miles of 12- through 24-inch potable southern pipeline
- TAKE 3: In lieu Brine Disposal IEBL 6,800 ft 8" pipeline, possible jack and bore across 300 ft under Hwy 71 and Chino Creek
- TAKE 7: 7 miles of 36- to 72-inch e/w WFA pipeline
- TAKE 7: 4.5 miles 24-inch e/w FWC pipeline
- TAKE 7: 4.5 miles 54- to 72-inch & 36-inch CVWD/MWD pipeline
- TAKE 7: 0.3 miles 54- to 72-inch MWD pipeline
- TAKE 8: 6.3 miles of 48-inch CVWD pipeline
- TAKE 8: 7 miles of 24-inch FWC-1 pipeline
- TAKE 8: 0.7 miles of 24-inch FWC-2 pipeline
- TAKE 8: 0.8 miles of 24-inch MWD pipeline
- TAKE 8: 36-inch JCSD 2 miles
- PUT 5: 7.1 miles of 8- to 30-inch pipeline for purified water conveyance
- PUT 5: 1,400 ft (8' pipeline) NRWS brine conveyance; NRWS Capacity Units required 2,603

The CBP would install a circular, prestressed tank storage reservoir with a maximum capacity of 5 MG with possible and in-conduit hydropower facility.

The CBP would install up to 4 pump stations serving various PUT and TAKE facilities. One pump station would serve PUT facilities, while up to three pump stations would support TAKE facilities. The breakdown of the types of pump stations include a mix of the following:

- PUT 5: Pump station at RP-4 1,500 HP
- TAKE 1: Pump Station with a max 9,300 HP, and a max of 31,100 gpm, 823 ft TDH
- TAKE 3: Potable Water Pump Station #1: 7,000 HP, 23,300 gpm firm capacity, 823 ft TDH
- TAKE 7: WFA Booster at 1,700 HP
- TAKE 7: FWC Booster at 300 HP
- TAKE 7: CVWD/MWD Booster at 4,800 HP
- TAKE 8: Booster Station #1 at 5,300 HP
- TAKE 8: MWD Booster at 650 HP

The CBP would install a maximum of 6 that would be between 12" and 72" in size turnouts in support of TAKE facilities within IEUA's service area. Possible turn out locations may or may not include the following:

- to FWC Highland Zone (and optional hydropower facility)
- to CVWD Zone III (and optional hydropower facility)
- to the Rialto Pipeline
- to Agua de Lejos clear well (Upland and MVWD)
- to TVMWD Miramar WTP clear well (HGL 1,630ft)

Project Category 3: Groundwater Storage Increase

As discussed under Subsection 3.3.1, Chino Basin Groundwater, the proposed CBP requires an increase the Safe Storage Capacity of the Chino Basin in order to accommodate the additional managed storage to accommodate the CBP above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035). As such, As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as Watermaster stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter. The storage increase would accommodate the CBP during its 25-year planning horizon, and any future required increase in storage that may be necessary to accommodate the increased recharge and extraction capacities provided by CBP infrastructure would be addressed in future CEQA documentation. This proposed tiered increase would supersede the Safe Storage Capacity that was approved in March of 2021 by the IEUA Board and subsequently approved by the CBWM in May 2021.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity 15,000 AFY. Additionally, the CBP may install up to 3 wellhead treatment facilities at a location that has yet to be selected up to 3,000 AFY each, with no more than 6,000 AFY treated in total through biological or other wellhead treatment mechanisms (treatment mechanisms are discussed in further detail TM1, which is provided as Appendix 1).

Operational Scenarios

Operational Scenarios are provided above under Subsections 3.9 Chino Basin Program Put Facilities, 3.10 Chino Basin Program Take Facilities, and 3.11 Chino Basin Program Conveyance Facilities. Operational scenarios are repeated and condensed under this section.

Possible operational scenarios are provided as part of the discussion of each type of facility. The future modes of operation (activities) are provided to enable evaluation of the direct and indirect environmental impacts that could result from CBP implementation.

Construction Scenarios

Secondarily, as part of this summary of all facilities, estimated construction scenarios are provided as part of the discussion of each type of facility. The purpose of the following general construction scenarios is to assist the reviewer to understand how the proposed facilities will be installed, the amount of time required for their construction, and potential direct and indirect environmental impacts. This information also provides essential data for making the program air quality impact forecasts using the most current CalEEMod emission forecast model.

For some of the facilities anticipated by the CBP, the types, configuration and exact location of future specific projects that may be constructed in support of the CBP have not been determined. However, there are several specific projects and scenarios that have been identified at a sufficient level of detail that a location has been pinpointed in which a specific project will be developed. Ultimately, it is possible to foresee most of the infrastructure that is likely to be constructed and to project the reasonably foreseeable direct and indirect impacts that would result from construction and operation of the infrastructure. Impacts associated with specific future projects could be evaluated in second-tier CEQA evaluations to determine if the actual impacts fall within the impacts forecast by this analysis, or require subsequent CEQA evaluations and determinations. These evaluations would be conducted under CEQA Section 21166 and Sections 15162 and 15168 of the State's CEQA Guidelines.

Alternative Energy Sources

Current renewable on-site generation at RP-4/IERCF (these two facilities share the same Southern California Edison's meter) is about 20%. In addition to the 1 MW wind turbine and 1.5 MW battery at RP-4, additionally, there is a potential for use of a 2.5 MW solar at the IERCF. As the proposed project has not undergone site specific design, at this time, alternative energy options would be explored when design has been further specified. Additionally, the proposed project, while energy intensive, would constitute a reduction in energy required to transfer water from MWD in the Sacramento Delta to IEUA's service area through creating an expanded source of water within the Chino Basin.

3.12.1 Project Category 1: Well Development and Monitoring Devices

Operational Scenario: Wells

The CBP anticipates the installation of up to 37 new wells, (16 injection wells (12 duty, 4 standby), 17 extraction wells, 4 monitoring wells). The Injection wells will recharge up to 15,000 AFY per year, while the new extraction wells will pump up to 50,000 AFY of water from the Basin in call years, or 10,000 AFY in non-call years (only 7.5 call years are anticipated over a 25-year period). After the 25-year period in which the CBP would be active, IEUA member agencies could utilize the water purified at the AWPF in the amount of 15,000 AFY.

The 16 injection wells would have a maximum operational capacity of 830 gpm each.

The 17 extraction wells would have a maximum operational capacity of 2,000 gpm each.

The 4 monitoring wells will be visited by a field technician on a monthly to quarterly frequency. There is negligible energy consumption in obtaining groundwater levels from a monitoring well.

The 9 existing extraction wells would be assumed to operate in a similar manner, on average, to the new proposed extraction wells discussed above.

Construction Scenario: Wells

Installation of the 37 new wells could occur over a period of 3 years, with 12 wells being installed each year to coincide with the opening year (2028) of the AWPF. Thus, for analysis purposes it is assumed that a maximum of 12 wells per year may be developed. The depth of a new wells could range between 500 and 1,500 feet. The average area of disturbance of a well site is anticipated to be half an acre or less. Development of up to 12 new wells during a given year will require the delivery and set up of the drilling rig at each site. It is anticipated these wells will be drilled at different times and the drilling equipment will be transported to and from the sites on

separate occasions. For the purposes of this evaluation, it is forecast that delivery of the drilling equipment 12 times in a year will result in 12 50-mile round-trips for the drill rigs.

Injection well development has essentially the same construction impacts as production well development. The primary physical difference between injection and production wells is that different valve options are installed according to the type of well.

It is anticipated that about five persons will be on a given well site at any one time to support drilling a well: three drillers, the hydrologist inspector, and a foreman. Daily trips to complete the well will average about 15 roundtrips per day, which at various points of construction will include: two roundtrips for drill rigs; between 6 and 12 roundtrips for cement trucks; about 5 trips to deliver pipe; and about 10 trips per day for employees.

For analysis purposes it is assumed that each well would be drilled using the direct rotary or fluid reverse circulation rotary drilling methods. The average area of disturbance of each well site is estimated to be one-half an acre or less. Access to the drilling site for the drilling rig and support vehicles would be from adjacent roadways. Typically, well drilling requires only minimal earth movement and/or grading.

The drilling and development of each well will require drilling to—in most cases—between 250 and 1,500 feet below ground surface (bgs). The proposed schedule for constructing each well would be as follows: drilling, construction, and testing of each well would require approximately six weeks to complete (about 45 days, of which 15 to 20 days would include 24-hour, 7-day a week drill activity). For planning purposes, a construction and testing schedule duration of 60 days per well is assumed to account for unforeseen circumstances (e.g., extreme weather, equipment breakdowns, etc.) that could affect the drilling and testing schedule. The well casings are expected to be welded and it will be assumed that well development and installation will require a two week use of a diesel generator.

The borehole for the well would be drilled using at least two separate drilling passes. The first pass, or pilot borehole, would be drilled using a 17.5-inch diameter bit to an estimated maximum depth below the ground surface, which would correspond to the top of the consolidated bedrock in the area, or a depth selected by the project hydrologist/hydrogeologist. Upon completion of the geophysical logs, the pilot borehole would be enlarged (reamed) to a diameter of 24 inches to approximately the same depth to accommodate the well casing, screen and filter pack.

Once each well is constructed it would immediately be developed through a process of swabbing and airlifting. During this process, drilling fluids and suspended sediment would be removed from the well. After the drilling fluids are removed along with most of the suspended sediment, the well would be further developed through pumping.

The use of existing wells is not anticipated to require construction beyond that which is described under Subsection 3.12.1.4, Advanced Water Purification Facility and Other Water Treatment Facilities, as several of these wells would require wellhead treatment in order to become operational in support of the CBP.

3.12.2 Project Category 2: Conveyance Facilities and Ancillary Facilities

Operational Scenario: Pipelines, Booster Pumps, Water Storage Tank, Brine Disposal, Etc.
Pipelines and Turnouts: Once a pipeline or turnout is installed, operations do not require any visits unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In the event of routine maintenance one vehicle trip per maintenance event would be required.

Brine Disposal: The proposed AWPF and wellhead treatment facilities would generate greater brine disposal within IEUA's service area than that which is generated at present. The additional brine stream flow from the AWPF at RP-4 would be 1,027,300 gpd, with a chemical oxygen demand of 262 pounds per day (ppd) and total suspended solids, dry (TSS) of 1 ppd, dry. The additional brine stream flow from the AWPF at RP-4 would be 1,027,300 gpd, with a chemical oxygen demand (COD) of 262 ppd and TSS of 1 ppd, dry. The brine stream flow from the AWPF would ultimately need to be treated at Los Angeles County Sanitation Districts (LACSD) through the Joint Outfall System (JOS) or at the Orange County Sanitation District (OCSD). Additional energy similar to that which would be generated by the AWPF commensurate with the amount of brine generated by the operation of these new IEUA facilities (about 1,150 AFY).

Pump Stations: Pump stations that are incorporated into the project will be operated to convey the water, the capacity and amounts of water pumped varies depending upon the CBP scenario that is ultimately selected. A total of 4 pump stations will be installed.

It is assumed that the three TAKE Pump stations would range between 650 HP to 9,300 HP, with the booster pumps averaging 4,200 HP each.

The PUT pump station would operate at 1,500 HP.
Water Storage Tank: Once the reservoirs are installed, operation of the reservoirs would not require any shifts or employees as they will be monitored and controlled remotely. Scheduled maintenance visits to each reservoir site will occur in the future with one trip per maintenance event. Reservoirs typically do not directly consume energy as water or recycled water is pumped into reservoirs directly from wells or through booster pump stations.

Construction Scenario: Pipelines
An estimated 30 miles or 158,400 LF of pipeline may be installed in support of CBP. The maximum pipe length that would be installed in a single year would be 100,000 LF. Installation of 158,400 LF of pipeline could occur over a period of 3 years, with 53,000 LF being installed each year to coincide with the opening year (2028) of the AWPF.

It is forecast that most of the pipe will range from 10-inch to 48-inch diameter. It is assumed that an underground utility installation team can install an average of 200-400 LF of pipeline per day. A team consists of the following:

- 200-400 feet of pipeline installed per day
- 1 Excavator
- 1 Backhoe
- 1 Paver
- 1 Roller
- 1 Water truck
- Traffic Control Signage and Devices
- 10 Dump/delivery trucks (40 miles round trip distance)
- Employees (14 members per team, 40-mile round-trip commute)

The emissions calculations are based upon the above assumptions for each pipeline installation team. Typically, up to 800 feet of pipeline trench could be excavated, the pipe installed, backfilled, and compacted each day during pipeline installation in undeveloped areas whereas only 400 ft per day can be installed in developed roadways. In either case equipment would be operated for roughly the same portion of the day and daily equipment emissions would be the same, except, that undeveloped areas would not require pavement removal and reinstallation.

It is assumed that three teams will be installing pipelines for a maximum total of 1,200 LF per day (400 x 3 = 1,200 LF). It is assumed that the proposed pipeline installation will occur for a maximum of 260 days in one calendar year.

Ground disturbance emissions assume roughly half an acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of pipeline in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine). Depending on the pipe size, the trenches may vary in depth and width. A 12” pipeline may have a depth of about 6” and 4” in width. A 72” pipeline may have a depth of about 10” and 10” in width.

The pipelines that would be installed in support of CBP are anticipated to use push-on joints (e.g., gasketed bell-and-spigot) that do not require welding or, where the sizing is greater than 24” cement mortar lined and coated (CML&C) welded steel pipe is preferred. However, the Contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

Construction Scenario: Turn Outs

Turnout structures are provided to deliver water from the main canal to the water user via a pipeline or other means. The type of turnout structure and its design requirements are primarily dependent on its location. It is anticipated that installation of a maximum of 6 turnouts that would be between 12” and 72” in size would require a similar team of workers to that of pipeline installation. Installation of 6 turnouts that would be between 12” and 72” in size could occur over a period of 2 years, with 3 turnouts being installed each year to coincide with the opening year (2028) of the AWPF.

A team of turnout installers would consist of the following:

- 1 Excavator
- 1 Backhoe
- 1 Paver
- 1 Roller
- 1 Water truck
- Traffic Control Signage and Devices
- 10 Dump/delivery trucks (40 miles round trip distance)
- Employees (14 members per team, 40-mile round-trip commute)

The emissions calculations are based upon the above assumptions for each turnout installation team. It is assumed that one team will be installing turnouts at a given time and that each turnout would require 180 days to be fully installed.

Ground disturbance emissions assume roughly a quarter acre of land would be actively excavated on a given day. It is anticipated that installation of pipeline in developed locations will require the

use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck and two dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day and a paving machine and compacter operating 2 hours per day. Installation of turnout in undeveloped locations would require the same equipment without the paving equipment (cutter, grinder, paving machine). The contractor may occasionally use a portable generator and welder for equipment repairs or incidental uses.

Construction Scenario: Pump Stations

Pump stations are required to pump water from areas at a lower elevation within the Basin, to areas located at a higher elevation. The total number of pump stations to be constructed in support of the CBP is anticipated to be 4.

It is forecasted that, at each site, no more than 0.5 acre will be actively graded on a given day for site preparation of each pump station. Construction of each pump station will require the delivery and installation of equipment and materials. It is anticipated that grading activities will occur over a 5-day period and this phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation of the pump station will require the use a crane, forklift, backhoe and front loader operating 4 hours per day. Calculations assume five workers will each commute 40 miles round-trip to the work site.

Each pump station is assumed to be housed within a block building, and will require a transformer to be installed to handle the electric power delivered to the pumps. The proposed pump station building may include a pump room, electric control room, odor control facilities, chemical tanks, and storage room. Construction of the pump station would involve installation of piping and electrical equipment, excavation and structural foundation installation, pump house construction, pump and motor installation, and final site completion.

The pump stations proposed are anticipated to be located at sites that have permanent power available for construction, as such a generator is not anticipated to be required for welding required to construct the pump stations.

Construction Scenario: Water Storage Tank

One 5 MG storage tank is anticipated to be required in support of the CBP. The new tank would be designed in accordance with the California Building Code (CBC), the Occupational Safety and Health Administration (OSHA), American Concrete Institute (ACI), and AWWA's design standards. AWWA's design standards require that reservoirs be operated at fill levels below their maximum physical height in order to prevent roof damage which may be caused by a "sloshing wave" during a seismic event. As a result, the usable capacity of the new reservoir will be reduced from its physical capacity by approximately 30% to 5 MG.

Grading: During mass grading of the site an assumed 5,000 cubic yards (CY) of selected materials will be imported as an engineered backfill. This material will be delivered by trucks to the site in the amount of about 300 trips, assuming 50 trips maximum per day to and from the site, with a roundtrip length of no more than 50 miles. Fine grading of the site will be completed after the reservoir and piping are installed. It is assumed that a maximum of five to twelve workers will be on the site during grading, which would take place for about 10 days.

Foundation Construction: Following mass excavation, the tank foundation will be installed. The foundation will consist of concrete/steel/aggregate. It is assumed that a maximum of five to twelve workmen will be on the site during foundation construction for a maximum of about 25 days.

Tank Construction: The new 5 MG storage tank will be constructed in the following fashion: floor; walls and columns; roof; prestressing; and appurtenances. It is assumed that a maximum of 12 employees will be on the site during reservoir construction for a maximum of about 50 days.

Overall, reservoir construction is anticipated to require about 3 months from start to finish.

3.12.3 Project Category 3: Groundwater Storage Increase

The CBP proposes the expansion of the safe storage capacity from 700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035 up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter. Generally, this expansion would not result in any visible above ground impacts; however, in order to ensure safe storage capacity within the Chino Basin, the facilities outlined herein (as part of 3.12 Summary of Facility Construction and Operations) are intended to support this expansion.

3.12.4 Project Category 4: AWPF and Other Water Treatment Facilities

Operational Scenario: AWPF and Wellhead Treatment Facilities
Please refer to **Exhibits 10, 11 and 12**, which depict the proposed modifications to RP-4 to enable the installation of the AWPF.

The Operational Scenario for the 15,000 AFY AWPF at RP-4 is discussed in detail under Subsection 3.9.3. Refer specifically to **Table 12** (description of redundancy requirements) and Table 13 (sizing assumptions for the AWPF).

The example Operational Scenarios for the wellhead treatment at is discussed in detail under Subsection 3.10.4, In-Lieu CBP and In-Lieu Local. Refer Specifically to **Table 19**.

According to the IEUA FMP, over the course of the next 15 years, IEUA intends to procure 100 percent of its electricity needs from carbon neutral sources, so in that period of time IEUA will slowly begin to use less carbon sourced energy for greater operational demands.

Construction Scenario: Advanced Water Purification Facility
The installation of the AWPF at RP-4 would require approximately 12 months to construct. It is anticipated that the AWPF would be operational by 2028. The construction of the 15,000 AFY advanced water purification facility would consist of site clearing, grading, construction of facilities, installation of equipment, and site completion. Construction equipment would include the following: one bull dozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 20 persons. The maximum number of truck deliveries is forecasted at 15 per day at 40-miles round-trip per day of construction. Materials and equipment would be delivered to the site including piping, building materials, concrete forms, roofing materials, HVAC equipment, pumps, diffusers, screens, belt presses, and screw presses.

Construction Scenario: Wellhead Treatment Facilities

The CBP envisions constructing up to 3 wellhead treatment facilities located in the vicinity of multiple wells at existing member agency wells. The area expected to be disturbed by the construction of the proposed treatment facilities would be less than 3 acres for each site. A regional groundwater treatment facility would will range from about 1 acre to 2 acres in size per facility. Construction of water treatment facilities may involve site demolition; site paving; site prep/grading; excavation and installation of yard pipes; installation of treatment facilities; site finishing (landscaping, misc. curb/cutter, etc.); site drainage (above and below grade).[12] Construction equipment would include the following: one bull dozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and a water truck. It is anticipated that the maximum number of construction personnel at a site on any given day will be 10 persons. The maximum number of truck deliveries is forecasted at 10 per day at 40-miles round-trip per day of construction. Each wellhead treatment facility will require about 6-months to construct, with both treatment systems assumed to potentially occur within the same year. The operational year is anticipated to coincide with the opening year (2028) of the AWPF.

3.13 ENTITLEMENTS, APPROVALS AND OTHER AGENCY PARTICIPATION

Implementation of future individual project(s) in accordance with the CBP may require a variety of approvals from other agencies. This section summarizes agency approvals that have been identified to date. This list may be expanded as the environmental review proceeds. Consequently, it should not be considered exhaustive.

- Notice of Intent (NOI) to the SWRCB for a NPDES general construction stormwater discharge permit. This permit is granted by submittal of an NOI to the SWRCB, but is enforced through a Storm Water Pollution Prevention Plan (SWPPP) that identifies construction best management practices (BMPs) for the site. In the project area, the Regional Board enforces the BMP requirements described in the NPDES permit by ensuring construction activities adequately implement a SWPPP. Implementation of the SWPPP is carried out by the construction contractor, with the Regional Board and county providing enforcement oversight.

- The project may include the potential discharge of fill into or alterations of “waters of the United States,” “waters of the State,” and stream beds of the State of California. Regulatory permits to allow fill and/or alteration activities due to project activities such as pipeline installation are likely be required from the Army Corps of Engineers (ACOE), the Regional Board, and California Department of Fish and Wildlife (CDFW) over the life of the OBMPU. A Section 404 permit for the discharge of fill material into “waters of the United States” may be required from the ACOE; a Section 401 Water Quality Certification may be required from the Regional Board; a Report of Waste Discharge may be required from the Regional Board; and a 1600 Streambed Alteration Agreement may be required from the CDFW.

- The U.S. Fish and Wildlife Service (USFWS) and/or CDFW may need to be consulted regarding threatened and endangered species documented to occur within an area of

[12] Please refer to the discussion of the construction scenario for conveyance facilities for a depiction of the construction associated with installation of pipeline that may be associated with the proposed regional groundwater treatment facilities.

potential impact for future individual projects. This could include consultations under the Fish and Wildlife Coordination Act.

- Land use permits may be required from local jurisdictions, such as individual cities and the two counties (Riverside and San Bernardino).

- Air quality permits may be required from the South Coast Air Quality Management District (SCAQMD).

- Encroachment permits may be required from local jurisdictions, such as individual cities, California Department of Transportation (Caltrans), the two counties (Riverside and San Bernardino), Flood Control agencies, and private parties such as Southern California Edison, The Gas Company, or others such as BNSF Railway Company.

- Watermaster has a separate approval process for the Storage and Recovery Application including material physical injury analysis and consistency with the court approved management agreements within the Chino Basin.

- SWRCB will be a responsible agency if permits or funding are requested from the State Revolving Fund Program or SWRCB's Division of Drinking Water. Additionally, water supply connection permits will be required from DDW upon connecting an agency supply to a new source of supply.

This is considered to be a partial list of other permitting agencies for future CBP future individual projects.

3.14 AREAS OF KNOWN CONTROVERSY

1. Unused recycled water supplies
2. Regional benefits vs benefits of participating agencies (cost related)
3. Groundwater storage/storage and recovery program

Unused Recycled Water Supplies
In FY 2020/2021, an average of 56,150 AFY of recycled water supply was produced at IEUA's water recycling plants. Of which, 19,534 AFY was used as recycled water direct use and 16,253 AFY was used through surface spreading for groundwater recharge. The remaining supply of 20,364 AFY was discharged as effluent to the Chino Creek and Cucamonga Creek, which eventually reaches the Santa Ana River. IEUA recycled water is used by its Regional Contract Agencies (RCAs) as direct use and are allocated pro-rata shares of the recycled water that is recharged. Some of the RCAs do not utilize all the available recycled water supply for direct use due to a lack of potential customer uses, facilities, and funding opportunities. This unused recycled water supply makes up the plant effluent that is discharged. With the Chino Basin Program, a portion of the unused recycled water supply that is currently discharged would be dedicated by participating RCAs as the source water for the advanced water purification facility (AWPF). As the interest in maximizing the use of available recycled water continues to grow, there are issues of concern as to how the remaining available supplies are put to use.

Regional and Participating Agency Benefits
The CBP offers both regional benefits and participating agency benefits through the operation of the CBP facilities. Regionally, the construction of the AWPF by 2028 reduces the risk of salinity

non-compliance, which will allow for the continued use of recycled water for direct use and surface spreading recharge within the Chino Basin. As drought conditions occur, advanced treatment of recycled water will ensure permit compliance. For the participating agency benefits, the CBP facilities will create new local water supplies, diversify their water portfolio, and provide resilience during imported water supply interruptions. The investments by the participating agencies in the water supply reliability provides indirect benefits to the rest of the water agencies within the Chino Basin in developing their enhanced local supply and reducing demands on imported water during periods of shortages and/or outages. The allocation of the costs to the regional benefits that would result from CBP implementation and to participating agencies remains a topic that continues to evolve.

Groundwater Storage/Storage and Recovery Program
With the CBP facilities, groundwater storage of advanced treated recycled water will be achieved through injection wells. Storage capacity in the Chino Basin will be acquired through a Storage and Recovery Program application administered by the Chino Basin Watermaster. The amount of storage anticipated for the CBP is 150,000 AF. This amount of storage will exceed the current approved storage capacity of 700,000 AF and accommodates accommodate both CBP storage requirements as well as Watermaster stakeholder storage requirements. The Storage and Recovery Application for the CBP will identify mitigation measures that would protect the Basin from Material Physical Injury (MPI), and would ensure that Hydraulic control is maintained. IEUA will be required to adhere to these mitigations in order to carry out CBP operations within the Basin. Allocation of storage within the Basin remains a topic of concern, as storage and recovery programs by IEUA, as well as other Watermaster Stakeholders are desired because groundwater storage has become an important resource for long term supply planning within the Basin.

3.15 CEQA RESPONSIBLE AGENCIES

Table 33 depicts the many agencies that may be responsible agencies under CEQA as they are stakeholders of the overall Chino Basin Program.

Table 33
CBP WORKGROUP STAKEHOLDERS

Stakeholder	Retail Member Agencies[1]	IEUA Member Agency	Wastewater Contract Agency[1]	Chino Basin Appropriative Pool[2]	Other
Chino Basin Water Conservation District					✔
Chino Basin Watermaster					✔
Chino Desalter Authority (CDA)					✔
City of Chino	✔	✔	✔	✔	
City of Chino Hills	✔	✔	✔	✔	
City of Fontana		✔	✔	✔	
City of Montclair		✔	✔		
City of Ontario	✔	✔	✔	✔	
City of Pomona				✔	
City of Upland	✔	✔	✔	✔	
Cucamonga Valley Water District (CVWD)	✔	✔	✔	✔	
Fontana Water Company (FWC)	✔			✔	
Jurupa Community Services District (JCSD)				✔	

Stakeholder	Retail Member Agencies[1]	IEUA Member Agency	Wastewater Contract Agency[1]	Chino Basin Appropriative Pool[2]	Other
Metropolitan Water District (MWD)					✔
Monte Vista Water District (MVWD)	✔			✔	
San Antonio Water Company (SAWCO)	✔			✔	
Three Valleys Municipal Water District (TVMWD)					✔
Water Facilities Authority (WFA)		✔			✔
West Valley Water District (WVWD)				✔	✔
Western Municipal Water District (WMWD)					✔

Notes: [1]Source: IEUA-WFA Final 2015 Urban Water Management Plan (Arcadis, June 2016).
[2]Source: Appropriative Pool Committee, Calendar Year 2019.

3.16 NOTICE OF PREPARATION COMMENTS ON THE PROJECT DESCRIPTION

No comments were received at the scoping meeting held for the proposed Project. Four comment letters specific to the Project Description were received during the Notice of Preparation Comment Period. These are:

Comment Letter #1 from California State Water Resources Control Board, Division of Drinking Water (DDW) (dated 10/11/21) states:

- *DDW would like to see the following addressed in the EIR:*
  - *Include a list of all the water systems within the Project, the water system's number, and water system components that will be added to each system that will trigger a drinking water supply permit amendment.*
  - *Include a description of these new or modified components of the Project in enough detail to determine if a new water supply permit or permit amendment will be required.*
  - *Provide a project site map that includes all new or modified water system components with the water system they belong to.*
  - *Include the State Water Resources Control Board, Division of Drinking Water, in any list of agencies that will be approving a permit, and the drinking water permit(s) mentioned under any list of permits needed.*

Comment Letter #5 from the City of Ontario (dated 10/14/21) states:

- *The Project Description should include the following:*
  - *Describe the Agency participation and financing for the Program and expand on how it is anticipated that the program will be paid for at a local level.*
  - *Describe the administration of performance criteria during call years for participating and non-participating agencies, including limitations on access to imported water for either participating or non-participating agencies.*
  - *Identify the sources and supply of recycled water to be treated and pledged to the program, and include a description of the Project's compliance with participating agency's Right to First Purchase of treated wastewater per the Regional Sewerage Contract*
- *The City of Ontario believes that the program objectives should be modified as follows:*
  - *Objective 3, which states "Develop infrastructure that addresses long term supply vulnerabilities" should be removed and replaced with the City's proposed objective 7*

- *Objective 4 should be revised to state "provide a **local** source of water…"*
- *Objective 5 should be revised to state "Enhance recharge **(injection wells and/or recharge basins)** and…"*
- *Objective 6 should be revised to state "Develop a solution to produce environmental benefits by enhancing local supply and reducing reliance on important water"*
- *Proposed Objective 7, which the City proposes should replace Objective 3 states "Develop local water resources by utilizing recycled water locally in the Chino Groundwater Basin to meet the current and future needs of a growing region"*
- *Proposed Objective 8 states "Minimize the need for additional infrastructure by optimizing existing infrastructure"*
- *Proposed Objective 9 states "Comply and be consistent with the Regional Sewerage Contract, including but not limited to compliance with each Contracting Agency's Right of First Purchase of treated wastewater"*

Comment Letter #6 from the California Department of Fish and Wildlife (CDFW) (dated 10/14/21) states:

- *CDFW attached notable goals, objectives, and performance monitoring and asks that IEUA keep these in mind when preparing the EIR.*
  - *Approximately 70% of the supply is of local origin coming from local groundwater, local precipitation and surface flows, and recycled water Maintain reliable and resilient water supplies and reduce dependency on imported water.*
  - *Manage at the watershed scale for preservation and enhancement of the natural hydrology to benefit human and natural communities.*
  - *Preserve and enhance the ecosystem services provided by open space and habitat within the watershed.*

Comment Letter #7 from the Orange County Water District (OCWD) (dated 10/14/21) states:

- *OCWD states that it believes that IEUA must divert 17,000 AFY of tertiary recycled water to the Santa Ana River (SAR) or its tributaries above the Prado Dam.*
- *OCWD relays support for IEUA's effort to utilize wastewater to meet growing demands and reduce independence on imported water, while also complying with the Basin objective for TDS.*
- *OCWD states that the EIR should discuss and quantify the change in the amount of imported water to Southern California during an average year and over the 25-year lifespan of the CBP that would result from its implementation.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Chapter, the Project Description.

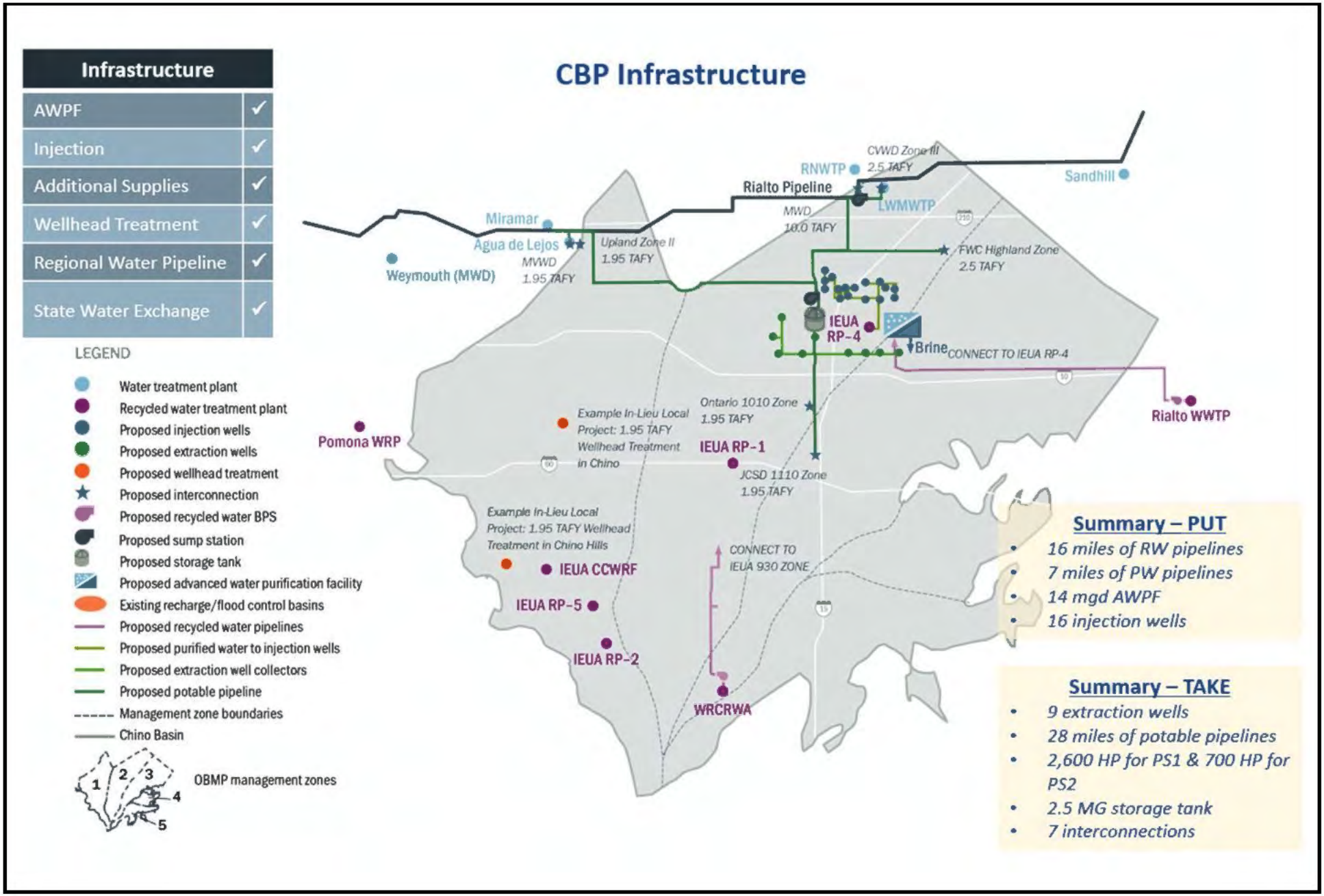

FIGURE 1

Tom Dodson & Associates
Environmental Consultants

CBP Infrastructure

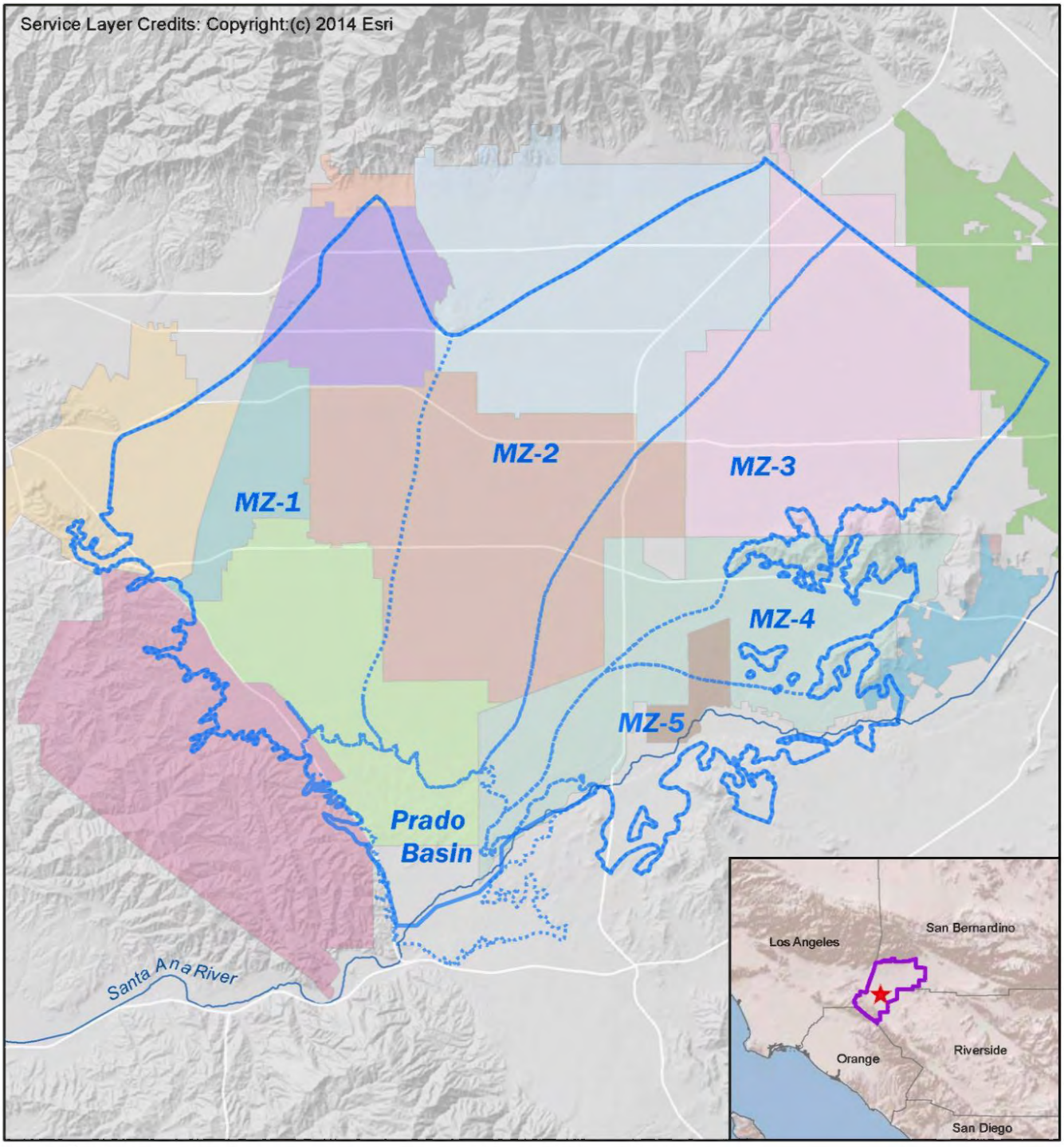

FIGURE 2

Tom Dodson & Associates
Environmental Consultants

Chino Basin Management Zones

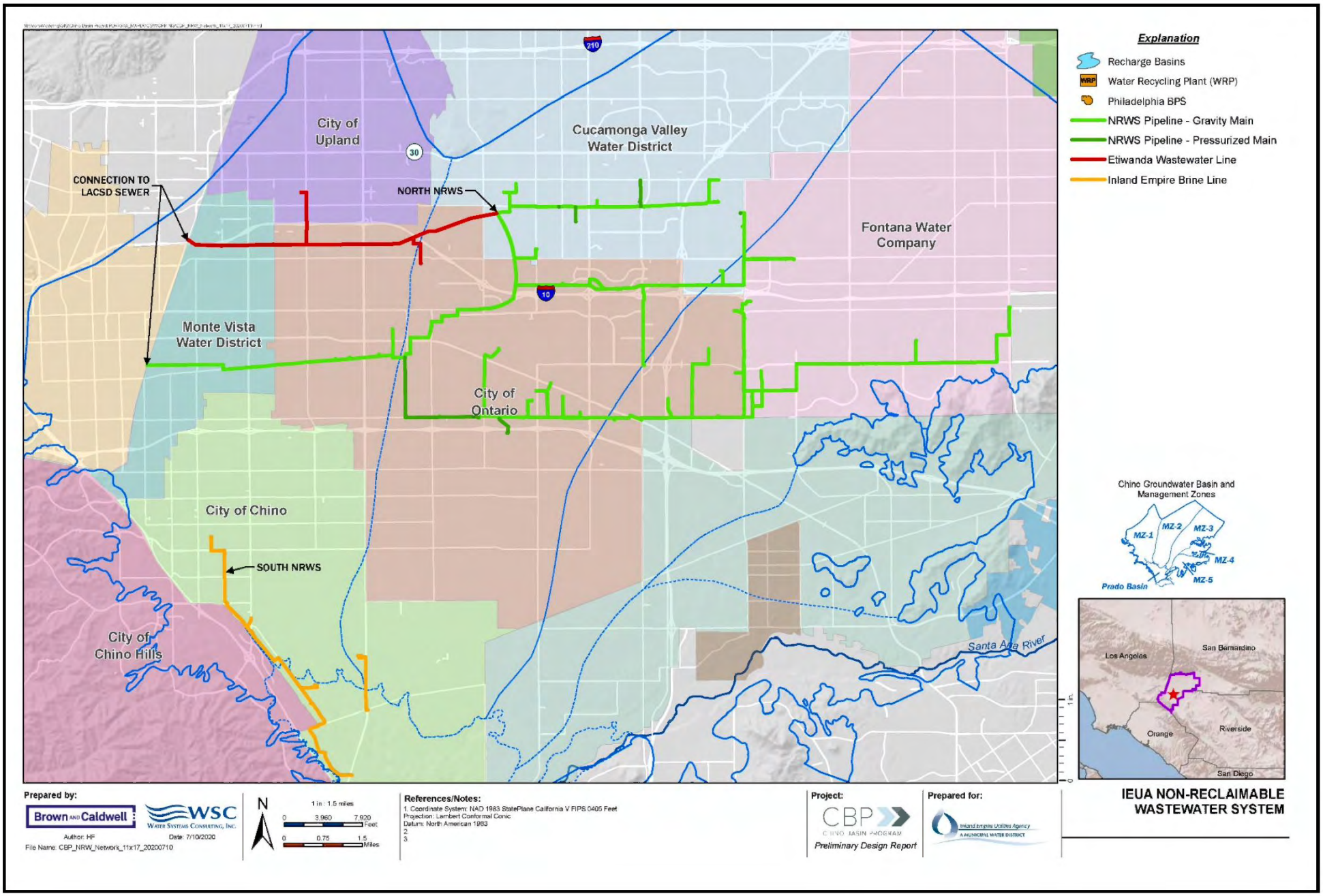

FIGURE 3

Tom Dodson & Associates
Environmental Consultants

IEUA Non-Reclaimable Wastewater System

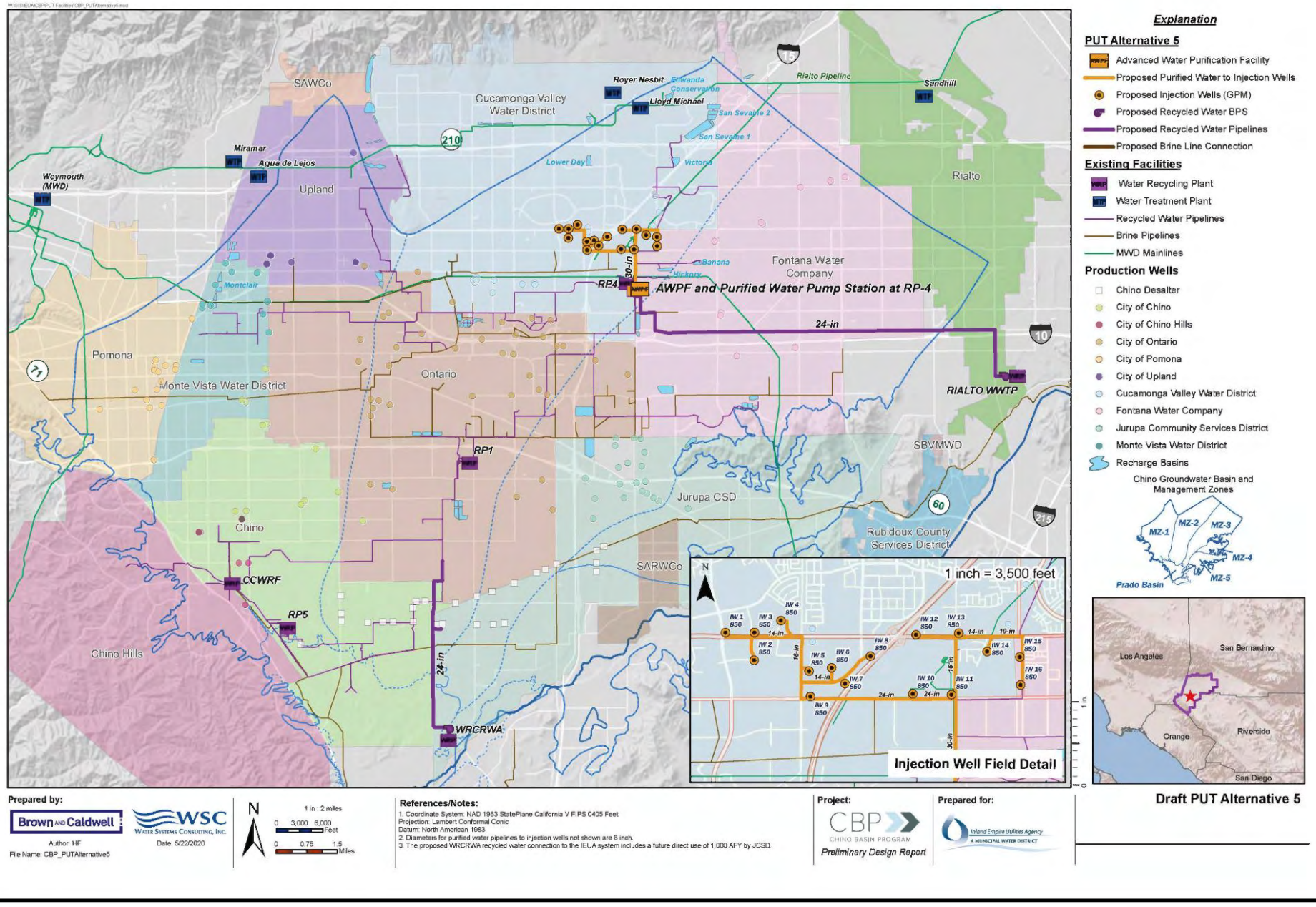

FIGURE 4

Tom Dodson & Associates
Environmental Consultants

PUT Option 5 Map

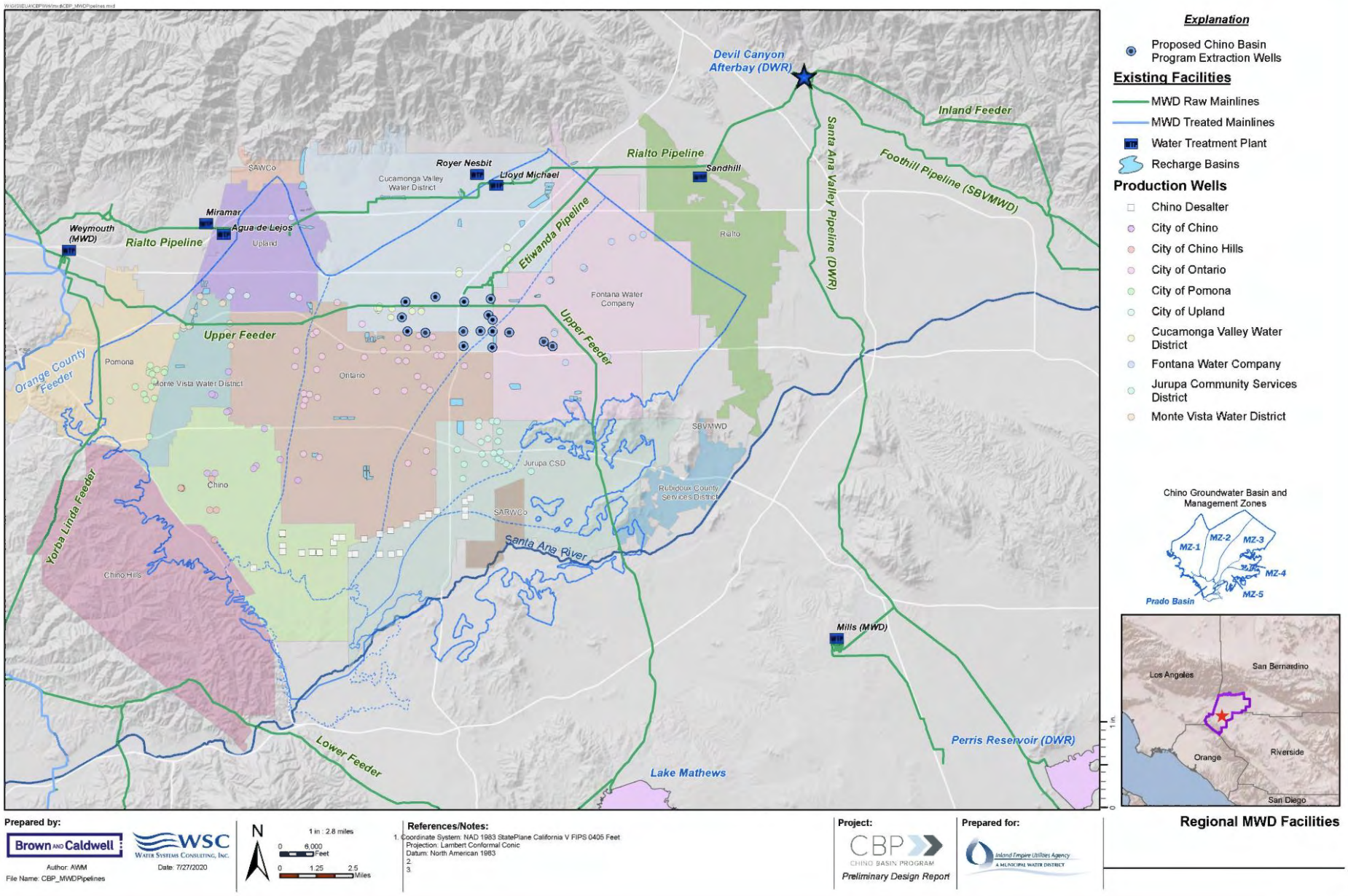

FIGURE 5

Tom Dodson & Associates
Environmental Consultants

Regional MWD Facilities

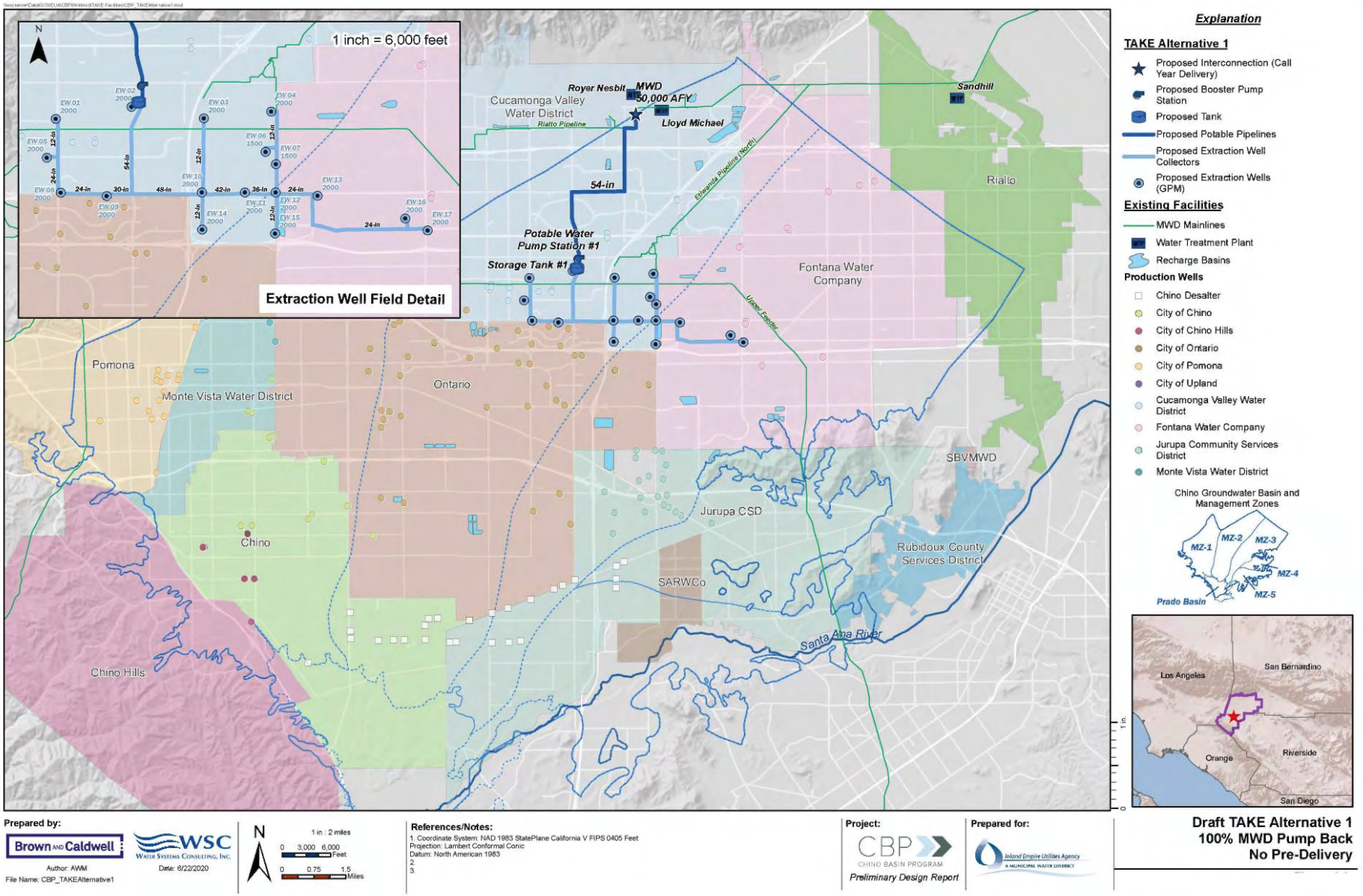

FIGURE 6

Tom Dodson & Associates
Environmental Consultants

TAKE Option 1 100% MWD Pump Back, Standard Delivery

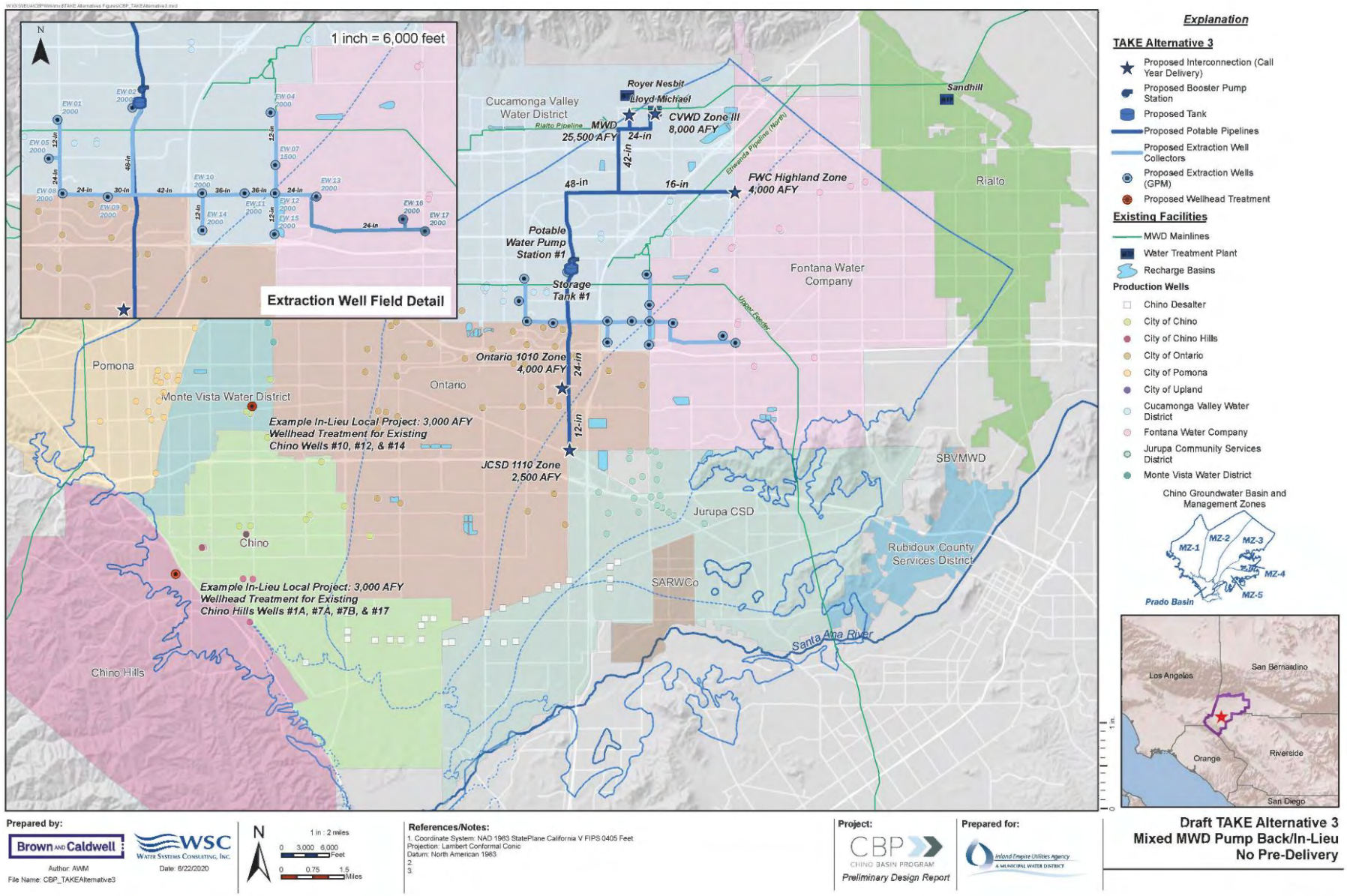

FIGURE 7

Tom Dodson & Associates
Environmental Consultants

TAKE Option 3 Partial MWD Pump Back and Partial In-Lieu, Standard Delivery

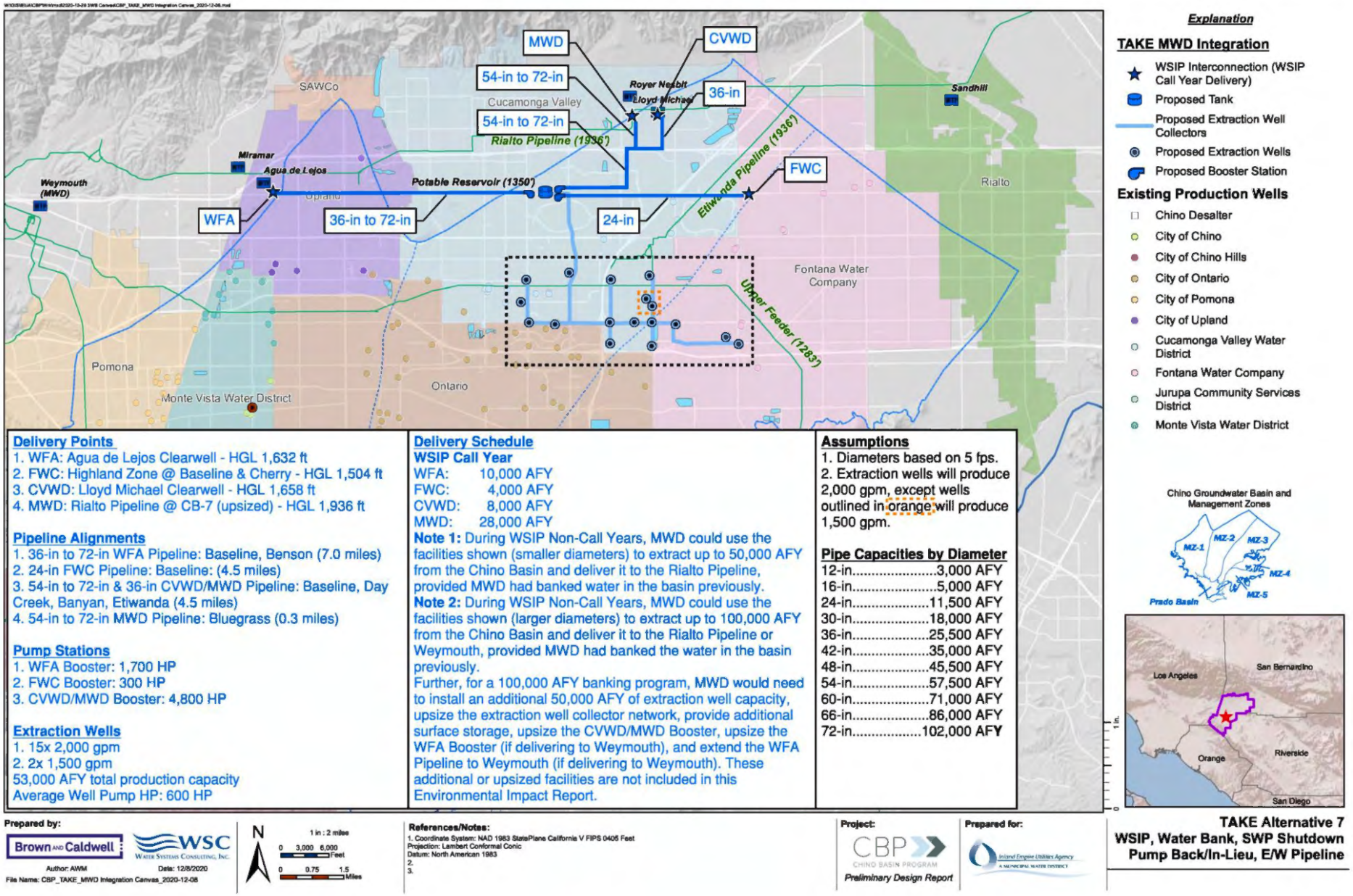

FIGURE 8

Tom Dodson & Associates
Environmental Consultants

TAKE Option 7 WSIP, Water Bank, SWP Shutdown Pump Back / In-Lieu, E/W Pipeline

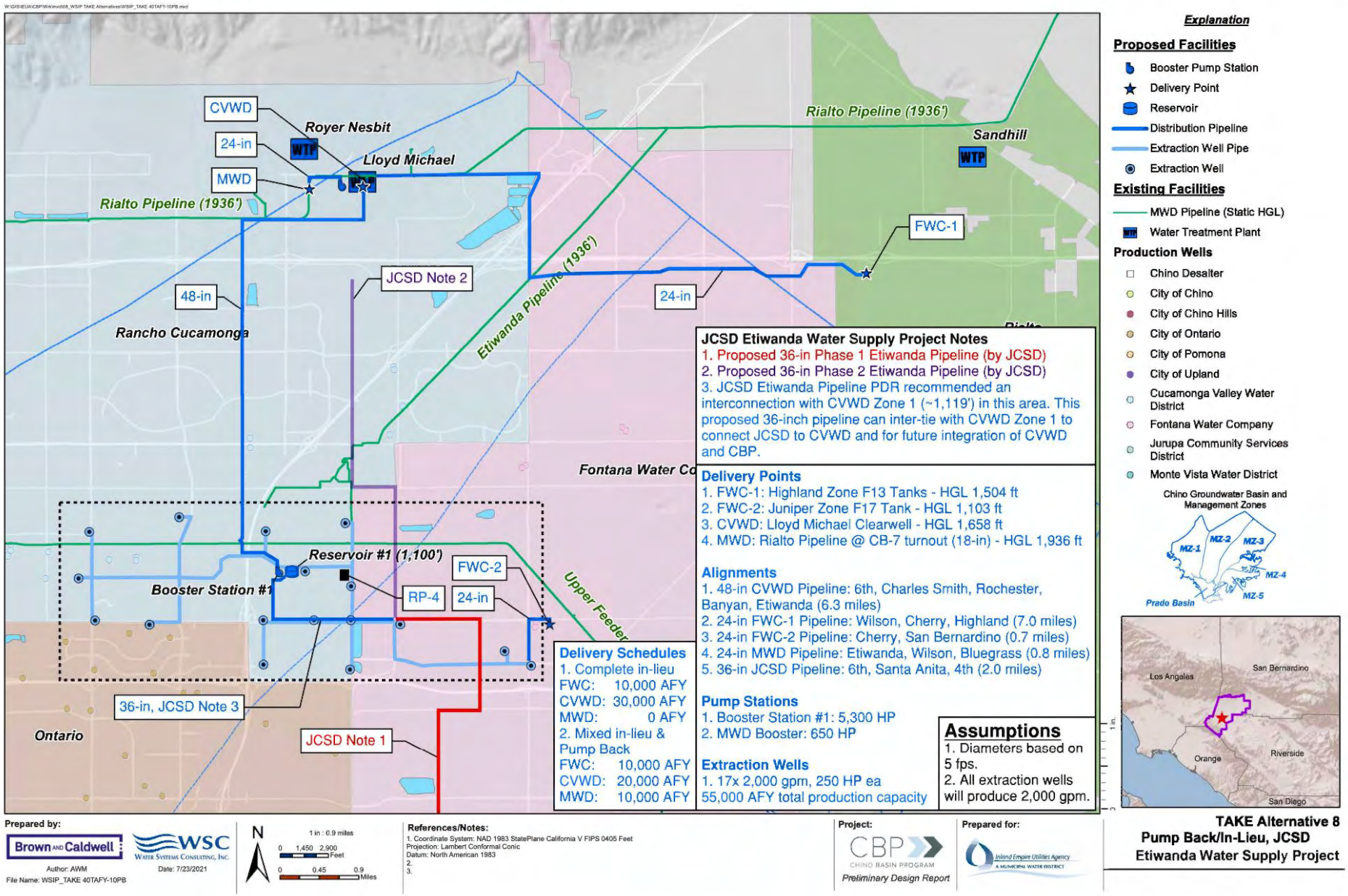

FIGURE 9

Tom Dodson & Associates
Environmental Consultants

TAKE Option 8 Pump Back / In-Lieu, JCSD Etiwanda Water Supple Project

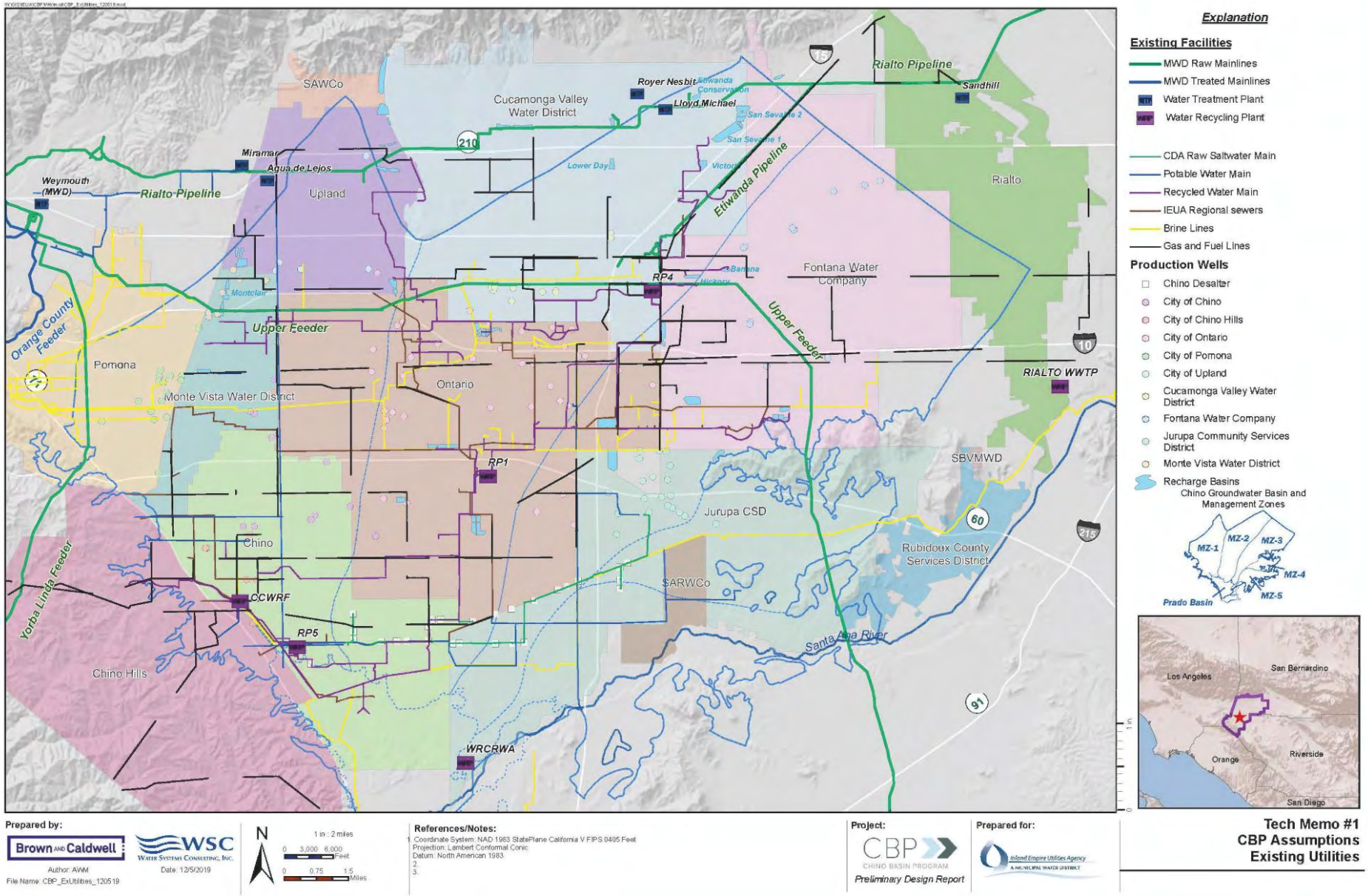

FIGURE 10

Tom Dodson & Associates
Environmental Consultants

Existing Utilities Map

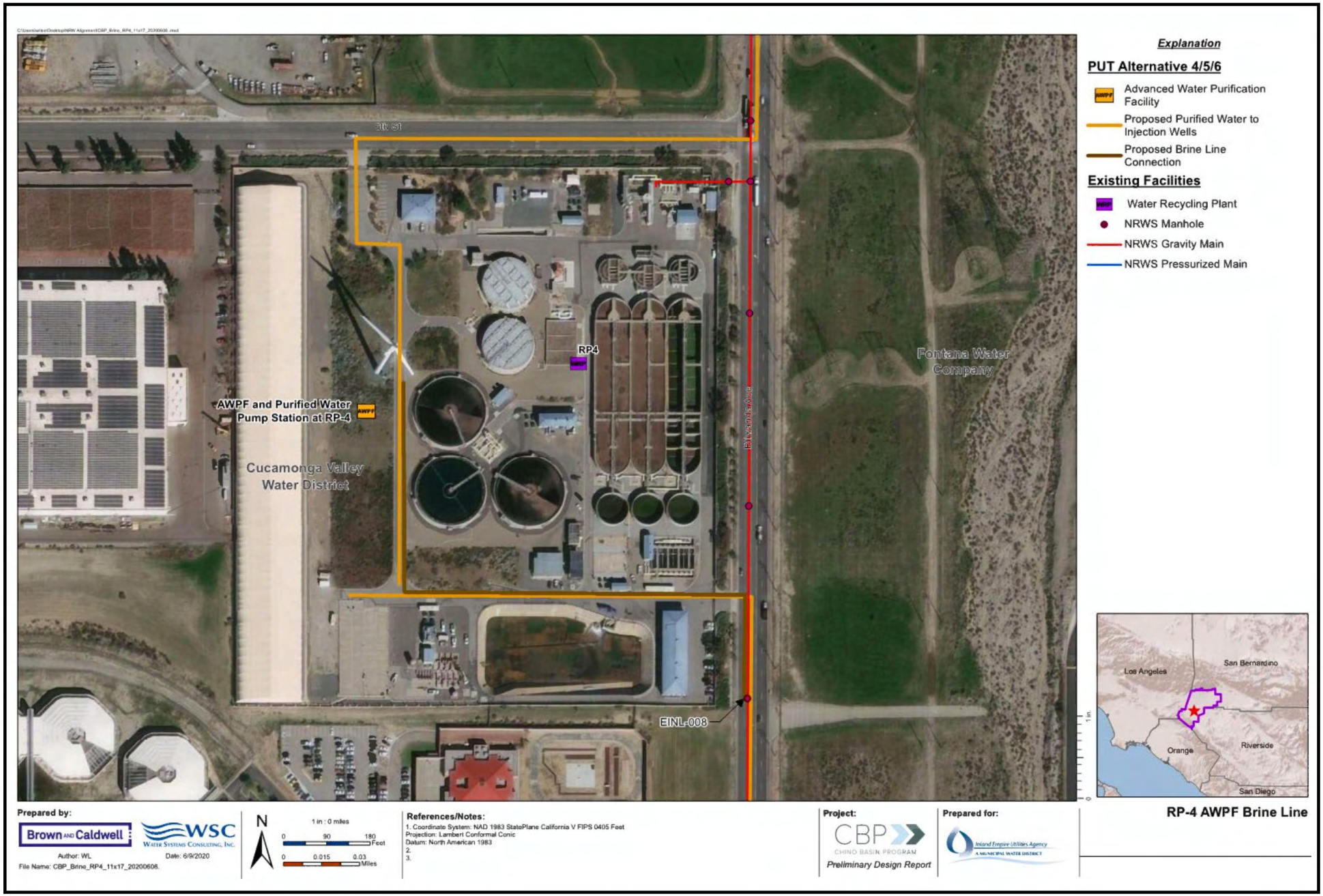

FIGURE 11

Tom Dodson & Associates
Environmental Consultants

RP-4 AWPF Brine Line

FIGURE 12

Tom Dodson & Associates
Environmental Consultants

City of Chino Hills Wellhead Treatment Facility Brine Line

CHAPTER 4 – ENVIRONMENTAL IMPACT EVALUATION

All Chapter 4 figures are located at the end of each subchapter; not immediately following their reference in text.

4.1 BACKGROUND

The Inland Empire Utilities Agency (IEUA or Agency) serves as wholesale imported water distributor for the Chino Groundwater Basin (Chino Basin), provides industrial/municipal wastewater collection and treatment and other related utility services for the western portion of the Santa Ana River watershed in the southwestern-most portion of San Bernardino County. The IEUA has prepared a Draft Program Environmental Impact Report (DPEIR) to evaluate the potential significant environmental impacts that may result from implementing the Chino Basin Program (CBP).

IEUA and local partners have developed long-term plans to implement a variety of new infrastructure to meet future needs for wastewater treatment and potable water supplies, while increasing resiliency and sustainability of regional water resources management. Some of the facilities included in these plans are addressed in IEUA's ten-year forecast (TYF) and Integrated Water Resources Plan (IRP). The CBP provides an opportunity to implement critical long-term project components of these plans, addressing local, regional, and potentially statewide and federal water resources management issues. The CBP is a revolutionary, first-of-its-kind program designed to help the region move beyond traditional water management practices and into a new era of water use optimization. The CBP promotes proactive investment in managing the water quality of the Chino Groundwater Basin and in meeting regional water supply reliability needs in the face of climate change, while leveraging California's interregional plumbing system and the Chino Basin's future potential for water recycling to produce benefits to local, State, and federal interest.

The CBP was submitted for Proposition 1 – Water Storage Investment Program (WSIP) funding and was awarded $206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to develop and utilize a new AWPF to treat and store up to 15,000 acre feet per year (AFY) of recycled water in the Chino Basin and extract the water during call years, which will likely be in dry seasons. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new advanced water purification facility (AWPF) and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPF for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits.

IEUA's partner and the State Water Project Contractor that will facilitate the exchange for the CBP is Metropolitan Water District of Southern California (Metropolitan). The CBP would produce 15,000 AFY of new water supply for a period of 25-years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in hydrologically drier years when pulse flows in the Feather River would provide the most ecosystem benefit and other State Water Project (SWP) operations would not be affected. The exchange would be administered through agreements with the DWR, the California Department of Fish and Wildlife (CDFW), Metropolitan, and other project partners.

Additionally, new water stored in the Chino Basin would also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic

events that disrupt imported water infrastructure. The infrastructure included in the CBP is consistent with infrastructure identified to reduce recycled water salinity for regulatory compliance as well as water infrastructure that has been identified through IEUA's IRP effort.

The program would rely on water transfer agreements through Metropolitan. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to Metropolitan or use the water locally instead of taking raw imported water from Metropolitan (referred to as "in lieu"). Metropolitan would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years. The CBP includes two main categories of facilities: PUT and TAKE components. The PUT and TAKE components are summarized in Table 7, which has been extracted from the Project Description, below.

Table 7
SUMMARY OF PUT AND TAKE COMPONENTS

PUT Components	TAKE Components
• Tertiary recycled water supply and conveyance • Advanced water purification facility (AWPF) • Purified water pumping and conveyance • Groundwater recharge (injection wells and/or recharge basins)	• Groundwater extraction and treatment • Potable water pumping and conveyance • Potable water usage (Metropolitan pump back or in-lieu)

Ultimately, the CBP brings together these components cost-effectively and greatly enhances flexibility and resiliency to regional and local water operations, particularly during future extended droughts expected as climate change continues to impact California. The CBP's proposed AWPF, new injection and extraction facilities, conveyance facilities, and water system interconnections will allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure.

Additionally, the proposed CBP requires an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate an addition of up to 150,000 AF of managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035). As such, the CBP would contemplate a tiered increase in Safe Storage Capacity that would accommodate CBP storage requirements as well as Watermaster stakeholder storage requirements as follows: the CBP proposes an increase in Safe Storage Capacity up to 700,000 AF through June 30, 2039, and to 580,000 AF from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter. The storage increase would accommodate the CBP during its 25-year planning horizon, and any future required increase in storage that may be necessary to accommodate the increased recharge and extraction capacities

provided by CBP infrastructure would be addressed in future CEQA documentation. Overall, the CBP may: reduce dependence on imported water through development of infrastructure that would provide a new local source of water; improve water quality by reducing the expected TDS concentration of the AWPF effluent to 100 mg/L; and providing a new local water supply for the Basin as a result of the creation of the AWPF that would enable IEUA to continue to treat recycled water below Santa Ana Regional Water Quality Board's Basin Plan regulatory limits for continued Basin use. This proposed tiered increase would supersede the Safe Storage Capacity that was approved in March of 2021 by the IEUA Board and subsequently approved by the CBWM in May 2021. Furthermore, as storage space in the Basin is regulated by Watermaster, a Storage Agreement will be required in order for this proposed Safe Storage Capacity to be adopted.

As the agency that will facilitate implementation of the CBP, IEUA will serve as the Lead Agency for purposes of complying with the CEQA. IEUA has prepared the CBP DPEIR as the Lead Agency, in cooperation with the California Department of Water Resources (DWR), the CDFW, State Water Resources Control Board (SWRCB), and MWD as responsible agencies. The California Water Commission (CWC) is a Responsible Agency, as it is the Agency that has conditionally awarded IEUA with funding to implement the CBP through the Proposition 1 WSIP. Other agencies that may be Responsible Agencies or Trustee Agencies include IEUA member agencies, listed under Subsection 3.15 of the Project Description.

IEUA has prepared the Chino Basin Program Draft Program Environmental Impact Report (DPEIR) that evaluates the potential environmental impacts that would result from constructing and implementing the proposed Project.

This chapter of the DPEIR provides the detailed information used to forecast the type and significance of potential environmental impacts that implementation of the proposed project and related actions could cause if the project is implemented as described in Chapter 3, the Project Description.

In the following subchapters, as discussed in Chapter 2 of this document, each of the 20 topics identified in Appendix G of the CEQA Guidelines will be analyzed as follows: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire. The environmental impact analysis section for each environmental topic is arranged in the following manner:

a. An introduction that summarizes the specific issues of concern for each subchapter, as identified in the NOP scoping process;
b. A summary of the current or existing environmental setting for each physical resource or human infrastructure system is presented as the baseline from which impacts will be forecast;
c. Based on stated assumptions and identified criteria or thresholds of significance, the potential direct and indirect impacts of the proposed Project are forecast and the significance of impacts is assessed without applying any mitigation; recommended measures that can be implemented to substantially lessen potential environmental impacts are identified, and their effectiveness in reducing impacts to non-significant levels is described; and, potential cumulative environmental impacts are assessed under each environmental topic, where applicable; and,
d. Significant and unavoidable environmental impacts and any significant impacts that may be caused by implementing mitigation measures are addressed.

To provide the reviewer with a criterion or set of criteria with which to evaluate the significance of potential environmental impacts, this document provides issue specific criteria, i.e., thresholds of significance, for each topic considered in this DPEIR. These criteria are either standard thresholds, established by law or policy (such as ambient air quality standards or thresholds of significance established by the South Coast Air Quality Management District) or project-specific evaluation thresholds used specifically for this project. After comparing the forecasted physical changes in the environment that may be caused by implementing the proposed project with the issue specific significance threshold criterion or criteria, a conclusion is reached on whether the proposed project has the potential to cause a significant environmental impact for the issue being evaluated.

Where appropriate and feasible, measures to reduce potential significant environmental impacts are identified and described in this section of the DPEIR. Over the past several years, mitigation has evolved in scope and complexity. As environmental issues are addressed in a progressive and adaptive manner, previous measures developed to mitigate project specific impacts are eventually integrated into local, regional, state and federal statutes, rules and regulations, such as the Uniform Building Code or Water Quality Management Plans. Mitigation measures that are incorporated into statutes or rules and regulations become mandatory requirements (not discretionary) and they no longer need to be identified as discretionary mitigation measures applicable to the project, although they are often referenced to demonstrate that identified environmental impacts can and will be mitigated.

The text in the following subchapters summarizes all of the various measures anticipated to be incorporated into the project to reduce potential significant environmental effects, either to the extent feasible or to a level of less than significant. After determining the degree of mitigation that can be achieved by the proposed measures and after identifying any potential adverse impacts that the mitigation measures may cause, a conclusion is provided regarding the remaining level of impact, such as less than significant and/or unavoidable significant adverse impact for each environmental topic, if any.

To the extent feasible, this document utilizes conservative (worst case) assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them. The many technical studies that were prepared for this document are incorporated into this chapter by summarizing the technical information to ensure technical accuracy. The Chino Basin Program Notice of Preparation (NOP) was distributed to the public and through the State Clearinghouse on September 16, 2021. The publication of the NOP established the date for all baseline information contained in this document. The various technical studies prepared in support of this DPEIR were all compiled and completed concurrent with or after the baseline date of September 16, 2021 and all analysis in the DPEIR was compiled subsequent to this date.

These technical studies themselves are compiled in a separate volume of the DPEIR (Volume 2) which will be distributed in electronic form and made available to all parties upon request. The information used and analyses performed to make impact forecasts are provided in depth in this document to allow reviewers to follow a chain of logic for each impact conclusion and to allow the reader to reach independent conclusions regarding the significance of the potential impacts described in the following subchapters.

4.2 AESTHETICS

4.2.1 Introduction

This section assesses potential aesthetic impacts from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Aesthetics
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- California Department of Transportation. 2021. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed 9/30/21)
- City of Chino. 2010. General Plan 2025. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/05_Community_Character_Final.pdf (accessed 10/1/21)
- City of Chino Hills. 205. General Plan. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 9/30/21)
- City of Chino Hills. 2021. Municipal Code. https://library.municode.com/ca/chino_hills/codes/code_of_ordinances?nodeId=TIT16DECO_CH16.08GEDERE (accessed 9/30/21)
- City of Eastvale. 2012. General Plan. https://www.eastvaleca.gov/home/showpublisheddocument/2360/635767198266670000 (accessed 10/1/21)
- City of Fontana. 2018. General Plan. https://www.fontana.org/2632/General-Plan-Update-2015---2035 (accessed 9/30/21)
- City of Jurupa Valley. 2017. General Plan. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 10/1/21)
- City of Montclair. 1999. General Plan. https://cloud.cityofmontclair.org/main.html?download&weblink=d9839f79a4f97e12ef5124cfc6527d13&realfilename=City%20of%20Montclair%20General%20Plan.pdf accessed 9/30/21)
- City of Ontario. The Ontario Plan Draft Environmental Impact Report. https://www.ontarioplan.org/wp-content/uploads/sites/4/2016/05/31672.pdf (accessed 10/1/21)
- City of Pomona. 2014. General Plan. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 9/30/21)
- City of Rancho Cucamonga. 2010. General Plan. https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf (accessed 10/1/21)
- City of Rialto. 2010. General Plan. https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan (accessed 10/1/21)
- City of Upland. 2015. General Plan. https://www.uplandca.gov/general-plan-map (accessed 9/30/21)
- City of Upland. 2015. Final Program Environmental Impact Report: General Plan Update, Zoning Code Update, Climate Action Plan, and Cable Airport Land Ise Compatibility Plan Update.

https://www.uplandca.gov/uploads/files/DevelopmentServices/Environmental%20Review%20Documents/FINAL%20GENERAL%20PLAN%20EIR%20with%20comments%20COMBINED.pdf (accessed 10/1/21)
- County of Riverside. 2021. General Plan. https://planning.rctlma.org/General-Plan-Zoning/General-Plan (accessed 10/1/21)

No comments pertaining to aesthetics resources were received in response to the Notice of Preparation, and none were received at the scoping meeting held on behalf of the CBP.

4.2.2 Environmental Setting: Aesthetics

The Chino Basin is one of the largest groundwater basins in southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet (AF). The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles Counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one- to two-percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. As shown in Exhibit 2, the Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

4.2.2.1 Scenic Resources

The Chino Basin is characterized primarily by dense urbanization including residential, commercial, and industrial land uses interspersed with undeveloped hilltops and distant mountain vistas. Valuable scenic resources within the service area are found sporadically on the valley floor and are visible from specific viewpoints on the valley floor. In contrast, the surrounding hilltops and mountain scenic vistas are generally available from all locations within the Chino Basin, with the majestic view of the San Gabriel Mountains forming the primary background vista within the area.

State Scenic Highways

California's Scenic Highway Program designates scenic highways with the intention of protecting these corridors from change that would diminish the aesthetic value of adjacent lands. A highway is designated as an eligible scenic highway when the California Department of Transportation (Caltrans) determines that the roadway corridor qualifies for official status. The status of an officially designated scenic highway changes when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated. Scenic highways must have an approved Corridor Protection Program and remain in compliance to maintain scenic highway status. According to the Caltrans State Scenic Highway Map, there is no officially designated or eligible scenic highway within the Chino Basin.[1]

[1] California Department of Transportation. 2021. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed 9/30/21)

San Bernardino County

The most significant visual resources in the unincorporated portion of San Bernardino County are the hills and mountains, pastoral landscapes in and within view of the Chino Basin and the Prado Basin wetlands that occur in the southern portion of the Chino Basin. The predominant scenic vistas in the Chino Basin area include views of the San Gabriel, San Bernardino, and Santa Ana Mountains; Chino Hills; Jurupa Hills; Puente Hills; San Jose Hills; Tonner Canyon; Prado Basin; and the remaining pastoral Chino farmlands. The Santa Ana River, Mill Creek (the southern portion of Cucamonga Creek), Chino Creek, the southern portion of San Antonio Creek, and the Prado Basin provide vegetated natural settings including riverine and wetland features bordering the southern edge of the Chino Basin area.

Riverside County

Riverside County contains abundant natural visual resources, including low-lying valleys, mountain ranges, rock formations, rivers, and lakes. These features are often enjoyed via Riverside County's many roadways. The County of Riverside has adopted General Plan policies to preserve and protect scenic vistas and visual features in the unincorporated portion of the county.[2]

City of Chino

Chino is relatively flat as it lies on the southwestern alluvial valley floor of the Chino Basin. The city has views of the San Gabriel and San Bernardino Mountains to the north, the Jurupa Hills to the east, Santa Ana Mountains to the south, and the Chino Hills to the west. The Chino General Plan does not identify specific scenic resources or local roadways of importance within its jurisdiction. The city contains older civic, commercial, and residential areas; newer residential neighborhoods; rural neighborhoods; retail corridors; and shopping centers. The southern portion of the city consists primarily of dairy operations, which are feeding areas and barns rather than agricultural fields. Industrial and warehouse uses are most common in the southern portions of the city. Open space areas in Chino consist primarily of open fields in the southern part of the city, below the 566-foot elevation line associated with the Prado Dam.[3]

City of Chino Hills

Chino Hills' rural character is largely defined by its natural setting, which consists of natural open spaces, ridgelines, canyons, wildlife corridors, woodlands, and native and heritage trees. Grass covered oak savannah woodland hillsides dominate the western and southern portions of the city and are a key aspect to the area's visual character. The hills are visible from nearly every neighborhood and major street within the city. Single-family neighborhoods penetrate into the hills in the northern half of the city, while most of the southern half is preserved as undeveloped open space. The principal component of the southern area is the Chino Hills State Park, a wilderness park of rangeland, oak woodlands, and chaparral. The Chino Hills General Plan states that no scenic highways have been designated within the city.[4] SR-142 within Chino Hills is an eligible State Scenic Highway; however, this highway is outside the Chino Basin.[5] The city's General Plan

[2] County of Riverside. 2021. General Plan. https://planning.rctlma.org/General-Plan-Zoning/General-Plan (accessed 10/1/21)
[3] City of Chino. 2010. General Plan 2025. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/05_Community_Character_Final.pdf (accessed 10/1/21)
[4] City of Chino Hills. 205. General Plan. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 9/30/21)
[5] California Department of Transportation. 2021. California State Scenic Highway System Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa (accessed 9/30/21)

identifies the following Exceptionally Prominent Ridgelines as important scenic resources. Chapter 16 of the Municipal Code defines the Exceptionally Prominent Ridgelines (listed below) and defines development standards and policies regarding visual resources:[6]

- Chino Valley Freeway (SR-71);
- Carbon Canyon Road (SR-142);
- Butterfield Ranch Road;
- Soquel Canyon Parkway;
- Chino Hills Parkway;
- Peyton Drive;
- Woodview Road;
- Eucalyptus Avenue;
- Tonner Canyon Road; and
- Grand Avenue.

City of Eastvale

Eastvale is located in northwestern Riverside County, within the Inland Empire region of southern California. Its boundaries extend from Hellman Avenue to the west (the San Bernardino County line), Philadelphia Avenue to the north (also the San Bernardino County line), the Santa Ana River and the City of Norco to the south, and I-15 to the east. The City of Eastvale General Plan identifies how the design of new development also has an impact on scenic vistas, natural areas (such as the Santa Ana River), and other desirable views. Good design ensures that desirable views are maintained and enhanced.[7]

City of Fontana

The central portion of Fontana is located on an alluvial plain that gently slopes south from the San Gabriel Mountains. The northern portion of the city extends into the San Gabriel foothills and the southern portion of the city extends into the northern-edge of the Jurupa Hills. The topography varies from characteristically flat in the central portion of the city, to gently to steep sloping hillsides in the San Gabriel foothills and Jurupa Mountains to the south. Views of the mountains at the northern and southern borders of the city are an important component of the city's aesthetic quality. Panoramic scenic view corridors towards the mountains and views of the city from the mountains dominate the city's visual landscape character. The Fontana General Plan discusses the importance of preserving the views of the Jurupa Hills and San Gabriel Mountains, character of the city, and historic landmarks but does not identify specific scenic resources or local scenic roadways within its jurisdiction.[8]

City of Jurupa Valley

Jurupa Valley is located in northwestern Riverside County. The topography of the city is varied with several hills along the northern boundary and center of the city. The city's quilted pattern of hills, valleys, and slopes provides a variety of scenic resources and vistas. Examples include the Jurupa Mountains, the Santa Ana River, and the Pedley Hills. The city's General Plan states the goal of preserving the city's scenic resources, including mountains, hills, ridgelines, rock outcroppings, canyons, mature trees, the Santa Ana River and floodplain, riparian corridors,

[6] City of Chino Hills. 2021. Municipal Code. https://library.municode.com/ca/chino_hills/codes/code_of_ordinances?nodeId=TIT16DECO_CH16.08GEDERE (accessed 9/30/21)
[7] City of Eastvale. 2012. General Plan. https://www.eastvaleca.gov/home/showpublisheddocument/2360/635767198266670000 (accessed 10/1/21)
[8] City of Fontana. 2018. General Plan. https://www.fontana.org/2632/General-Plan-Update-2015---2035 (accessed 9/30/21)

agricultural fields, and views of scenic resources from vista points or along scenic street or highway corridors. Scenic corridors in the city include Van Buren Boulevard, Limonite Avenue, Granite Hill Drive, Pedley Road, Sierra Avenue, 46th Street, and Crestmore Road.[9]

City of Montclair

According to the Montclair General Plan, the most dominant visual element within the city is I-10, which is elevated above existing grade for the entire segment between Mills Avenue (on the west) and Benson Avenue (on the east). I-10 physically divides northern Montclair (which is predominately allocated to commercial uses) from the remainder of the city (which is predominately allocated for residential uses). Physical access between these segments is only available along four roadways that link north to south (i.e., Mills Avenue, Monte Vista Avenue, Central Avenue, and Benson Avenue). Many of the major roadways within the city lack a distinct visual character that promotes a sense of identity for the city, enhances the driving experience, links the roadway to adjoining uses, or softens the urban edge between the automotive and non-automotive domains.[10]

City of Ontario

The dominant visual characteristic in Ontario is the San Gabriel Mountain range to the north. Other visual characteristics include the Jurupa Mountains and the San Bernardino Mountains to the east, the Santa Ana Mountains to the south, and Chino Hills to the southwest. Ontario is located in a highly developed, urban/suburban area with developed land uses (residential, commercial, industrial, agricultural, recreational, public, institutional, airport, and utility and transportation easements) located throughout the city. Ontario includes areas with panoramic views of the San Bernardino Mountains and San Gabriel Mountains and stretches of open space and undeveloped land south of Riverside Drive. Scenic vistas can be viewed from an extensive system of formal and informal trails that afford recreational, commercial, and scenic opportunities for the city. The Euclid Corridor and the Mission Boulevard Corridor are the primary scenic resources in Ontario.[11]

City of Pomona

Although Pomona is largely built out, large areas of natural, undeveloped lands remain as open hillsides that are visible from all over the city. These hillsides are essential parts of Pomona's character and identity. They include Westmont Hill and Elephant Hill, remaining natural hillsides abutting SR-60, and master-planned areas retaining strategic areas of open space such as in the Phillips Ranch development. One of the city's most valuable livability assets is its natural setting. By minimizing the visual prominence of hillside development, the city protects features such as ridgelines, grasslands, stands of trees, and individual mature trees that contribute to Pomona's natural beauty.[12]

City of Rancho Cucamonga

Rancho Cucamonga lies on the sloping alluvial plain of the Basin and extends up to the foothills of the San Gabriel Mountains. As the city's most prominent natural feature, the mountains run east-west and form an impressive visual background to the north. The orientation of the roadway

[9] City of Jurupa Valley. 2017. General Plan. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 10/1/21)
[10] City of Montclair. 1999. General Plan. file:///C:/Users/nwest/Downloads/City%20of%20Montclair%20General%20Plan%20(4).pdf (accessed 9/30/21)1009.
[11] City of Ontario. The Ontario Plan Draft Environmental Impact Report. https://www.ontarioplan.org/wp-content/uploads/sites/4/2016/05/31672.pdf (accessed 10/1/21)
[12] City of Pomona. 2014. General Plan. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 9/30/21)

network and elevation change (north-south) provides views of the foothills, the San Gabriel Mountains, and the San Bernardino National Forest. From the foothill area, long, open vistas to the south provide outstanding views of the Chino Basin to the Chino Hills and Santa Ana Mountains. These north-south views are particularly prominent along the straight alignments of Archibald, Haven, and Etiwanda Avenues. Additional scenic resources include the remaining stands of eucalyptus windrows, vineyards, and natural vegetation associated with flood control lands and utility corridors. Views of these resources are most prominent from the roadways and in certain locations from places of work and residences.

The Rancho Cucamonga General Plan identifies specific roadways as Special Boulevards. Special Boulevards are designated to incorporate extensive landscape setback areas, and denote where landscape and hardscape design, trails, and setback standards will be master planned and implemented and include all major arterials (divided and undivided), as well as several important secondary and collector segments. Special Boulevards include Haven Avenue, Milliken Avenue, Day Creek Boulevard, Base Line Road, Foothill Boulevard, Arrow Highway, Church Street, 6th Steet, 4th Street, Archibald Avenue, Rochester Avenue, Miller Avenue, Etiwanda Avenue, East Avenue, Wilson Avenue, and Victoria Park Lane.[13]

City of Rialto

In Rialto, the views of the San Gabriel Mountains, San Bernardino Mountains, and the foothills provide a backdrop for creating scenic vistas throughout the city. To protect scenic vistas, the city ensures that building heights and scale of projects do not hinder or impede scenic view. In addition, building materials in such locations are also carefully selected as to not produce glare or other distracting occurrences.[14]

City of Upland

Upland is located on the upper alluvial fan of San Antonio Creek, where the city extends into the San Gabriel Mountain foothills. The topography of the city is fairly flat, sloping gradually north toward the San Gabriel Mountains. [15] The Upland General Plan designates Foothill Boulevard, Euclid Avenue, Mountain Avenue, and Benson Avenue as scenic routes.[16]

4.2.3 Regulatory Setting

State and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.2.3.1 State

State Scenic Highway Program

Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way, that traverses an area of exceptional scenic quality. As previously stated, according to the

[13] City of Rancho Cucamonga. 2010. General Plan. file:///C:/Users/nwest/Downloads/GP%20Chapters%201%20-%209%20Updated%2009-2019.pdf (accessed 10/1/21)
[14] City of Rialto. 2010. General Plan. https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan (accessed 10/1/21)
[15] City of Upland. 2015. General Plan. https://www.uplandca.gov/general-plan-map (accessed 9/30/21)
[16] City of Upland. 2015. Final Program Environmental Impact Report: General Plan Update, Zoning Code Update, Climate Action Plan, and Cable Airport Land Ise Compatibility Plan Update. https://www.uplandca.gov/uploads/files/DevelopmentServices/Environmental%20Review%20Documents/FINAL%20GENERAL%20PLAN%20EIR%20with%20comments%20COMBINED.pdf (accessed 10/1/21)

Caltrans State Scenic Highway Map, there is no officially designated or eligible scenic highway within the Chino Basin.

4.2.3.2 Local

The Chino Basin encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated Cities. Each of these cities has its own General Plan and municipal code that identify goals and policies regarding preservation of scenic resources.

4.2.4 Thresholds of Significance

According to Appendix G, Section I of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

a) Have a substantial adverse effect on a scenic vista;
b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings; in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality;
d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area

4.2.5 Potential Impacts

This section evaluates the potential aesthetic impacts of the proposed CBP.

a) Would the project have a substantial adverse effect on a scenic vista?

Combined Project Categories
The proposed project would include construction of an advanced water purification plant, new injection and extraction facilities, conveyance facilities, and water system interconnections. The construction of the proposed facilities would require temporary ground-disturbance within the project sites. The presence of construction equipment and related construction materials would be visible from public vantage points such as open space areas public rights-of-ways such as roadways and sidewalks. Construction of the injection and monitoring wells could be visible from areas with sensitive viewers, such as the Pacific Electric Inland Empire Trail; however, construction impacts related to aesthetics would be temporary and short-term in nature and would not substantially affect scenic vistas in the area.

The proposed pipelines would be underground and would not be visible once constructed. Implementation of pipelines would not permanently alter a scenic vista. The change in the maximum storage space to be used in the Chino Basin would also not be visible and would not permanently alter a scenic vista. No impact to scenic vistas would occur as a result of these project components.

Once constructed, the proposed wells would each occupy a footprint anticipated to approximately less than one half acre. Many of the wells would be enclosed in a small structure, which is designed to minimize noise from the pumps required to operate a well. It is anticipated that the majority of the proposed wells would have small footprints and be low profile. It is also anticipated

that the pump stations would have small footprints and be low profile, as a pump station would occupy less space and be no taller than a small residential home.

Wellhead treatment facilities at or near well sites would occupy an area of about 0.5 to 2 acres and would not consist of high-profile structures that would impede views. Much like a pump station, this type of facility would individually have a small footprint, be low profile, and be no taller than a residential home.

The footprints of the water storage reservoir is anticipated to be large, given the 5 million gallon size proposed to be developed under the CBP. The location of the reservoir is presently unknown, and as such, it is possible that the development of above ground, steel storage reservoirs could affect views or designated scenic vistas, particularly along hillsides where the majority of scenic views are located. Mitigation is provided below to minimize impacts to scenic vistas from the development of steel or concrete aboveground storage reservoirs.

The advanced water purification facility would be located at an existing regional water recycling facility and would be consistent with the aesthetics of the existing facility.

Based on the preceding analysis, given that the locations of some CBP projects area presently unknown, it is possible that the development of above ground, larger projects could affect views of designated scenic vistas, particularly along hillsides where the majority of scenic views are located. The footprints of the CBP projects would be typically small and unobtrusive. However, Mitigation Measures (MMs) **AES-1** and **AES-2** are provided below to minimize impacts to scenic vistas from the development of aboveground CBP projects to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

AES-1: ***Proposed facilities shall be designed in accordance with local design standards and integrated with local surroundings. Landscaping shall be installed in conformance with local landscaping design guidelines as appropriate to screen views of new facilities and to integrate facilities with surrounding areas.***

AES-2: ***Future CBP facilities at unknown locations shall either (1) be located outside of scenic viewsheds identified in the General Plan or Municipal Code corresponding to a proposed location for a future facility; (2) be unobtrusive to scenic vistas due to height or other mitigating factors as confirmed by a visual simulation that demonstrates this; or (3) where (1) or (2) are not possible, undergo subsequent CEQA documentation to assess potential aesthetic impacts a future CBP facility may have upon contain scenic resources.***

Level of Significance After Mitigation: Less Than Significant

MM **AES-1** would ensure that facilities and landscaping comply with local design standards and are integrated with local surroundings. The implementation of MM **AES-2** will ensure that impacts to scenic resources from the implementation of future CBP facilities will be avoided or assessed further in future CEQA documentation. Thus, impacts would be reduced to a less than significant level.

b) Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are roadways classified as eligible for state scenic highway status within the Chino Basin; however, there are no officially designated scenic highways. Eligible state scenic highways include: State Route (SR) 142 south of SR 71 and SR 71 south of SR 83. The most significant visual resources are the hills and mountains surrounding the Chino Basin and the pastoral landscape that occurs in the southern portion of the Chino Basin. The activity with the highest potential to conflict with local agency design guidelines is construction disturbance of the landscape. Such disturbance can be reduced to an acceptable level by landscaping or revegetating disturbed areas (pipelines, recharge basins, structural developments, composting facilities, and above ground wastewater treatment facilities) either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in the area.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, within a site that is less than one half acre; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Though the precise location for future wells is presently unknown, these facilities will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. As such, the development of the facilities included in this Project Category would have no potential to impact scenic resources within a State scenic highway corridor. However, given that the locations for the proposed wells are largely unknown, mitigation is required to ensure that: (1) should the removal of trees be required for a specific project, IEUA shall comply with the local jurisdiction's tree ordinance, and (2) the specific location selected for a well shall avoid rock outcroppings and other scenic resources. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located below ground, and will be located within the Chino Basin, which, as stated above, does not contain any designated State scenic highways. Therefore, the development of conveyance facilities would have no potential to impact scenic resources within a State scenic highway corridor. It is anticipated that the majority of the proposed ancillary facilities would individually have small footprints. However, given that the locations of such facilities are presently unknown, it is possible that the development of ancillary facilities may impact other

scenic resources such as rock outcroppings or trees. As such, mitigation is provided to ensure that: (1) should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) the specific location selected for ancillary facilities shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no impacts to scenic resources can result.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 would occur within an existing developed facility, and as such, development at this site is not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of upgrades and improvements to existing facilities would be less than significant.

Similar to installation of the AWPF, development of wellhead treatment facilities at existing well sites would be consistent with that which exists at present at the well sites, and as such, these sites are not anticipated to contain significant scenic resources. Therefore, impacts to scenic resources from implementation of improvements to wellhead treatment facilities at existing well sites would be less than significant. However, some of the wellhead treatment facilities may be developed at vacant sites, and as such, their locations are presently unknown. These facilities would occupy an area of about 0.5 acre to 2 acres, and would not typically consist of high-profile structures that would impede views. Given that the locations for facilities of this type are unknown, it is not known whether such treatment facilities would cause a significant impact to scenic resources. As such, mitigation is provided to ensure that: (1) should the removal of trees be required for a specific project, the implementing agency shall comply with the local jurisdiction's tree ordinance, and (2) the specific location selected for a treatment facility shall avoid rock outcroppings and other scenic resources or shall require a subsequent CEQA determination. With the implementation of mitigation identified below, impacts to scenic resources would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AES-3: ***Should the removal of trees be required for a specific project, IEUA shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) the IEUA shall replace all trees removed at a 1:1 ratio, and (2) the specific location selected for a CBP facility shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a second tier CEQA evaluation shall be completed.***

AES-4: ***Future proposed facilities defined within the CBP at unknown locations shall either (1) be located within sites that avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G, or (2) undergo subsequent CEQA documentation to assess potential impacts from locating a future facility in an area that may contain scenic resources.***

Level of Significance After Mitigation: Less Than Significant.

The implementation of MM **AES-3** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant. Furthermore, MM **AES-4** would ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof.

c) Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality

Though the presence of agriculture is still prevalent within parts of the Chino Basin, the overall Chino Basin would be characterized as "an urbanized area." As such, the following will evaluate whether the project will conflict with applicable zoning or other regulations governing scenic quality.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, within a site that is less than one half acre; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in

size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Conveyance pipelines would be placed underground and would not be visible once construction is complete. Though the precise location for conveyance facilities is presently unknown, these facilities will all be located below ground, and as such, will have no potential to conflict with applicable zoning or other regulations governing scenic quality.

It is anticipated that the majority of the proposed ancillary facilities would individually have small footprints, though the proposed 5 MG reservoir would be quite large in size, therefore requiring a larger footprint than many of the other facilities proposed under this Project Category. Though the locations of such facilities are presently unknown, the proposed ancillary facilities will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed ancillary facilities will conform with design requirements established by local jurisdictions.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed increase in safe storage capacity would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 would occur within an existing developed facility, and as such, development therein would be consistent with the existing setting. Further development within this existing treatment facility would have no potential to conflict with applicable zoning or other regulations governing scenic quality.

Similar to installation of wellhead treatment facilities at existing well sites would be consistent with that which exists at present at the well sites, and as such, further development at these sites is not anticipated to result in a conflict with applicable zoning or other regulations governing scenic quality. However, some of the wellhead treatment facilities may be developed at vacant sites, as such, their locations are presently unknown. These facilities are anticipated to occupy an area of about 0.5 acre to 2 acres, and would not consist of high-profile structures that would impede views. Given that the locations for facilities of this type are unknown, such facilities will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable

zoning code, and to ensure that the proposed wellhead treatment facilities will conform with design requirements established by local jurisdictions.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AES-5: ***CBP facility implementation will conform with design requirements established in the local jurisdiction planning documents, including but not limited to the applicable zoning code, except where such compliance is not required by California law.***

AES-6: ***When CBP above ground facilities are constructed in the future, the local agency design guidelines for the project site shall be followed to the extent that they do not conflict with the engineering and budget constraints established for the facility and except where such compliance is not required by California law.***

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **AES-5** would ensure compliance with the applicable zoning code. Furthermore, MM **AES-6** would ensure that future facilities will conform with design requirements established by local jurisdictions.

d) Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Once constructed, the proposed wells would occupy a footprint anticipated to be less than 20 feet by 20 feet, within a site that would be less than one half acre in size; therefore, it is anticipated that the majority of the proposed wells would individually have small footprints and be low profile. Though the precise location for future wells is presently unknown, the facilities under this Project Category will be required to comply with the local jurisdiction zoning codes and any other regulations governing scenic quality. However, mitigation measures are required to ensure compliance with the applicable zoning code, and to ensure that the proposed wells will conform with design requirements established by local jurisdictions.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12” and 72” in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The conveyance systems would not require nighttime lighting because they would be placed belowground. As a result, there would be no new sources of lighting as a result of conveyance facilities. No impacts related to light and glare would occur.

The ancillary facilities may include nighttime security lighting mounted to the buildings and/or structures. These new sources of lighting could result in significant light intrusion impacts onto adjacent land uses. The proposed ancillary facilities would not include aboveground structures that would include uninterrupted expanses of glass or other highly-reflective construction material. Water storage reservoirs could be a source of glare due to highly reflective materials. Therefore, mitigation is provided below to minimize lighting and glare impacts related to ancillary facilities.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the increase in safe storage capacity would have no potential to result in any light or glare impacts.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 would occur within an existing developed facility already containing water treatment facilities that contain lighting. This facility is also located within an urban area developed with industrial and commercial uses. Implementation of the proposed improvements could result in new exterior nighttime lighting for operational and security purposes within the existing treatment facilities. The increase in lighting within existing treatment facilities could result in spill over lighting onto adjacent uses. Therefore, mitigation to address the increased lighting is provided below.

Similarly, installation of wellhead treatment facilities may occur at existing well sites. These wellhead treatment facilities may require additional lighting beyond that which currently exists at each well site, and therefore to protect nearby light sensitive land uses from direct light and glare from new lighting, mitigation to address the increased lighting is provided below. However, some of the wellhead treatment facilities may be developed at vacant sites, as such, their locations are presently unknown. These wellhead treatment facilities would require additional lighting. These facilities are not of a type that would be constructed within materials that would cause substantial glare, and as such no impacts are anticipated thereof. New exterior nighttime lighting for operational and security purposes is anticipated as a result of the development of these projects. The increase in lighting that would result from new wellhead treatment facilities near well sites could result in spill over lighting onto residential and commercial uses. Therefore, mitigation to address the increased lighting is provided below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

AES-7: Future CBP projects shall implement at least the following measures, unless they conflict with the local jurisdiction's light requirements, in which case the local jurisdiction's requirements shall be enforced:

- ***Use of low-pressure sodium lights where security needs require such lighting to minimize impacts of glare; Projects within a 45-mile radius of the Mount Palomar Observatory and located within Riverside County must adhere to special standards set by the County of Riverside relating to the use of low-pressure sodium lights.***
- ***The height of lighting fixtures shall be lowered to the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.***
- ***Directing light and shielding shall be used to minimize off-site illumination.***
- ***No light shall be allowed to intrude into sensitive light receptor areas.***
- ***Non-reflective materials and/or coatings shall be used on the exterior of all water storage reservoirs if constructed in a publicly visible location.***

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **AES-7** would ensure that light and glare impacts from future structures associated with the CBP are minimized to a level of less than significant.

4.2.6 Cumulative Impacts

Construction of the new facilities could alter existing views and contribute to significant cumulative aesthetic impacts in combination with other projects in the program area. The implementation of MMs **AES-1** through **AES-7** would ensure that the proposed facilities' contribution to cumulative aesthetic impacts would be reduced to less than cumulatively considerable by: ensuring that facilities and landscaping comply with local design standards and are integrated with local surroundings; ensuring that impacts to scenic resources from the implementation of future CBP facilities will be avoided or assessed further in future CEQA documentation; ensuring that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant; ensuring that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof ensuring compliance with the applicable zoning code; ensuring that future facilities will conform with design requirements established by local jurisdictions; and, ensuring that light and glare impacts from future structures associated with the CBP are minimized. Thus, the proposed CBP would not contribute cumulatively considerable contributions to cumulative aesthetics impact.

4.2.7 Significant and Unavoidable Impacts

As determined in the preceding evaluation, with the implementation of mitigation, all of the proposed project's potentially significant aesthetic impacts would be reduced to a level of insignificance and have no potential to result in significant and unavoidable aesthetics impacts in the Chino Basin.

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4.3 AGRICULTURE AND FORESTRY RESOURCES

4.3.1 Introduction

This subchapter evaluates the environmental impacts to agriculture and forestry resources from implementation of the Chino Basin Program (CBP). The following topics address whether the proposed project would convert farmland that is considered Prime, Unique, or of Statewide Importance; conflict with agricultural use or a Williamson Act contract; result in rezone or loss of forestry or timberlands; or otherwise convert farmland and timberlands to non-agricultural use or non-forest land, respectively. The purpose of the agriculture and forestry resources component of this DPEIR is to identify and provide analysis and assessment of the potential for agriculture uses and timberlands to exist within the Chino Basin or the sensitivity for such resources to be encountered at a future specific project site so that they can be incorporated into the planning process for future infrastructure and entitlement compliance considerations.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Agriculture and Forestry Resources
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- California Department of Conservation. Farmland Mapping and Monitoring Program, Division of Land Resource Protection. Available at: https://maps.conservation.ca.gov/cgs/eqzapp/app/. Accessed on September 29, 2021
- San Bernardino County, *San Bernardino Countywide Plan*, November 2, 2020
- San Bernardino County, *San Bernardino Crop Report,* 2020. Accessed at: http://cms.sbcounty.gov/Portals/13/AWM%20CROP%20REPORT%202020%20080521.pdf?ver=2021-08-05-160649-640
- Final Program Environmental Impact Report for the Optimum Basin Management Program (SCH#200041047), July 2000 prepared by Tom Dodson & Associates (2000 OBMP PEIR)

No comments pertaining to agriculture and forestry resources were received in response to the Notice of Preparation.

4.3.2 Environmental Setting: Agriculture and Forestry Resources

4.3.2.1 Regional Agriculture

According to the County of San Bernardino's *2020 San Bernardino County Crop Report,* San Bernardino County saw harvest of approximately 1,385,216 acres of non-irrigated and irrigated Important Farmlands in 2020, but has continued to see a decline in farmlands adjacent to existing urban areas over the years. Specifically, San Bernardino County experienced significant urban growth since 2010, ranking tenth in the State for urban growth. Approximately 18,643.4 acres have either been converted from agricultural to nonagricultural uses or have been out of use in San Bernardino County between 2010 and 2020.

According to the *2020 Annual Crop Report for San Bernardino County*, the gross value of agricultural production in San Bernardino County for 2020 totaled approximately $420.25 million, which equates to an increase of about 0.86 percent over 2019 production, primarily due to an increase in acreage used for field crops, livestock, and nursery products. Despite continued conversion of agricultural land in the County to business and residential development, agriculture is still an integral component of the economy in San Bernardino County. Almost 80 percent of the agricultural value in the County was produced in the southern portion of the Chino Basin.

The Chino Basin is located within the southwestern portion of the County, within an area historically containing significant agricultural resources, primarily dairy ranches located in the Chino, Chino Hills, and south Ontario areas of the Basin. Some of the historical dairy and agricultural operations in the Chino Basin have been converted to urban uses during the housing and industrial warehousing construction boom in the early part of this decade. **Figure 4.3-1** shows the agriculture and forest land zones within San Bernardino County.

There are several parcels of land designated by the California Department of Conservation (DOC) as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the southern portion of the Chino Basin, particularly in the southern portions of Ontario and Chino. Most of the Prime Farmland is located within Chino, Ontario, and the Prado Regional Park area, which is located in the southwestern portion of the program area. DOC Important Farmland designations within the service area are shown on **Figure 4.3-2**. Note the sparsity of important agricultural lands within the northern portion of the Chino Basin, north of SR-60.

4.3.2.2 Forestry

The San Bernardino National Forest is located just north of Upland, Rancho Cucamonga, Fontana, and portions of the unincorporated area San Bernardino County. The Chino Basin borders the San Bernardino National Forest, but it does not overlap with the National Forest (see **Figure 4.3-1**). Public Resources Code (PRC) para. 12220(g) defines “Forest Land” as “land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.” Under this definition certain woodland areas within the Prado Basin may qualify as “forest land.”

4.3.3 Regulatory Setting

State and local laws, regulations, plans, and guidelines that are applicable to the proposed project are summarized below.

4.3.3.1 State

California Farmland Mapping and Monitoring Program

The DOC, under the Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP). The FMMP monitors the conversion of the State’s farmland to and from agricultural use. The map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The FMMP maintains an inventory of State agricultural land and updates its “Important Farmland Series Maps” every two years. Important farmlands are divided into the following five categories based on their suitability for agriculture:

Prime Farmland. Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the four years prior to the mapping date.

Farmland of Statewide Importance. Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.

Unique Farmland. Unique Farmland has even lesser quality soils and produces the State's leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.

Farmland of Local Importance. Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

Grazing Land. Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowner's contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The Chino Basin has no Williamson Act contracts in place.

California Public Resources Code Section 12220(g)

The California Public Resources Code defines "forest land" under section 12220(g) as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526

The California Public Resources Code defines "timberland" as land, other than land owned by the federal government and land designated as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined after consultation with the appropriate state district. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)

The California Government Code defines "timberland production zone" under Section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Projects may significantly impact timberland resources if a project conflicts with existing areas zoned for timberland production.

California Land Evaluation and Site Assessment Model

The Land Evaluation and Site Assessment (LESA) is a point-based approach for rating the relative importance of agricultural land based upon specific measurable features.

The California LESA Model was developed to provide lead agencies with an optional methodology to ensure that potentially significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process (Public Resources Code Section 21095), including in CEQA reviews.

The California LESA Model evaluates measures of soil resource quality, a given project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. For a given project, the factors are rated, weighted, and combined, resulting in a single numeric score. The project score becomes the basis for making a determination of a project's potential significance.

4.3.3.2 Local

The Chino Basin area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. County of San Bernardino, County of Riverside, City of Chino, and City of Ontario policy documents contain goals and policies regarding farmland preservation.

San Bernardino Countywide Plan

The San Bernardino Countywide Plan identifies areas of prime and non-prime agricultural soils and operations to establish areas where agriculture and compatible uses may coexist with development, identified as Agriculture Zoning Districts.

The Natural Resources Element of the San Bernardino Countywide Plan includes the following goal and policies regarding agriculture that may be applicable to all project activities within the Chino Basin.

The Countywide Plan Natural Resources Element sets forth the following goal and policies pertaining to agriculture:

Goal	**NR-7**	Agriculture and Soils. The ability of property owners, farmers, and ranchers to conduct sustainable and economically viable agricultural operations.
Policy	NR-7.1	Protection of agricultural land. We protect economically viable and productive agricultural lands from the adverse effects of urban encroachment, particularly increased erosion and sedimentation, trespass, and non-agricultural land development.
	NR-7.2	Preservation of Important Farmlands. We require project applicants seeking to develop 20 or more acres of farmland (classified as prime, of statewide importance, or unique farmland) to non-agricultural uses to prepare an agricultural resource evaluation prior to project approval. The evaluation shall use generally accepted methodologies to identify the potentially significant impact of the loss of agricultural land as well as the economic viability and sustainability of future agricultural use of the property, including long-term sustainability and economic viability of water resources. If the conversion is deemed significant, the County shall require mitigation at a 1:1 ratio of converted to preserved acreage through

conservation easements, payment of its valuation equivalent if a fee mitigation program is established, or inclusion in a regional agricultural preservation program.

NR-7.3 Conservation and preservation incentives. We support programs and policies that provide tax and economic incentives to conserve existing productive agricultural lands or preserve farmland classified as prime, of statewide importance, unique, or of local importance. We support land owners in establishing new and maintaining existing California Land Conservation (Williamson Act) contracts.

County of Riverside

The County of Riverside Multipurpose Open Space Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the CBP area:

Goal **OS-7.3:** Encourage conservation of productive agricultural lands and preservation of prime agricultural lands.

OS-7.5 Encourage the combination of agriculture with other compatible open space uses in order to provide an economic advantage to agriculture. Allow by right, in areas designated Agriculture, activities related to the production of food and fiber, and support uses incidental and secondary to the on-site agricultural operation.

OS 8.1 Cooperate with federal and state agencies to achieve the sustainable conservation of forest land as a means of providing open space and protecting natural resources and habitat lands included within the MSHCPs.

OS-8.2 Support conservation programs to reforest privately held forest lands.

City of Chino General Plan, Open Space and Conservation Element

The City of Chino Open Space and Conservation Element includes the following goal and objectives regarding agriculture that may be applicable to all program activities within the CBP area:

Goal **OSC-2:** Connect Chino's residents to historic agricultural uses and support appropriate ongoing agricultural uses.

Objective OSC-2.1: Support links to Chino's agricultural history.

OSC-2.2: Preserve and protect the remaining agricultural land in Chino.

OSC-2.3: Minimize conflicts between agricultural and urban uses.

City of Ontario Biological, Mineral, and Agricultural Resources Element

The City of Ontario Biological, Mineral, and Agricultural Resources Element includes the following goal and policy regarding agriculture that may be applicable to all program activities within the CBP area:

Goal **ER5:** Protected high value habitat and farming and mineral resource extraction activities that are compatible with adjacent development.

Policy ER5-4: *Transition of Farms.* We protect both existing farms and sensitive uses around them as agricultural areas transition to urban uses.

4.3.4 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?
d) Result in the loss of forest land or conversion of forest land to non-forest use?
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

4.3.5 Potential Impacts

a) Would the project convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The Chino Basin area contains significant agricultural resources, primarily dairy ranches and vegetable farms located in the southwestern portion of San Bernardino County. There are several areas of land designated by the DOC as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Chino Basin area which includes portions of Riverside County (see **Figure 4.3-1**). Most of the important farmland in the Chino Basin is located within Chino, the Ontario, and the Prado Regional Park area, which is located in the southern portion of the program area.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

With 37 wells envisioned to support the CBP and an estimated one-half acre of disturbance for each new well, approximately 19 acres of future disturbance would result from implementing these new facilities. Those new facilities are generally anticipated to be located in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet, which would not cause the loss of any important farmland. Nonetheless, there is minimal potential that facilities located in the Chino and Chino Hills area would cause the loss of some important farmland soil resources. However, these well sites and support facilities are rarely required to be installed at a specific location, so mitigation is required to minimize future Project Category 1 facility impacts to a less than significant level, minimizing impacts to such resources in the southern portion of the Basin.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in

size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed conveyance facilities and ancillary facilities have a potential to be implemented throughout the entire Chino Basin. It is assumed that most pipelines would be installed within existing, disturbed public rights-of-way with support facilities in adjacent developed areas. All Project Category 2 facilities north of State Route (SR) 60 would not cause the loss of or adverse impact to important farmland resources. However, in the southern portion of the Basin, some conveyance facilities and support equipment may be required to be located within important farmland areas resulting in a potentially significant impact to such resources. Where this occurs mitigation will be implemented to avoid or compensate for such impacts, thus resulting in a less than significant impact.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed increase in safe storage capacity would have no potential to convert agricultural uses to non-agricultural use.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category includes an AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Most Project Category 4 facilities north of SR 60 would not cause the loss of or adverse impact to important farmland resources because there are only minimal important agricultural resources located north of SR 60 that exist within the project area (refer to **Figure 4.3-1**). Additionally, the proposed AWPF would be located at RP-4, which is an existing facility located outside farmland resources. If a wellhead treatment facility must be constructed within land designated as important farmland pursuant to **Figure 4.3-1**, it could impact important farmland. Mitigation is provided below to address any Project Category 4 facilities either through avoidance of Important Farmlands during site selection or through compensatory mitigation. Where this occurs, the mitigation would be implemented to avoid or compensate for such impacts, thus resulting in a less than significant impact.

Combined Project Categories

Proposed facilities could potentially be constructed on land designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Construction and operation of ancillary facilities could convert this land to non-agricultural use. Therefore, impacts would be potentially significant for all four Project Categories requiring mitigation outlined below to minimize impacts to a level of less than significant.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AGF-1: ***For all proposed facilities in the southern portion of the Chino Basin (south of SR 60), the California Department of Conservation: California Important Farmland Finder shall be consulted to determine whether a project would be installed within a site designated as Important Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance). If designated important farmland cannot be avoided, the IEUA shall conduct a California Land Evaluation and Assessment (LESA) model evaluation. If the evaluation determines the loss of important farmland will occur, IEUA shall either (1) relocate and avoid the site, or alternatively IEUA shall (2) where relocation is not possible, undergo subsequent CEQA documentation to assess potential impacts that a future CBP facility may have upon agricultural resources.***

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The cumulative analysis for impacts to agriculturally important farmland resources has been formulated based on an account of Important Farmland, located generally in the southern portion of the Chino Basin by IEUA. Because agricultural land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide Importance is limited and undergoing reduction within the Chino Basin, the loss of farmland acreage over the life of the program in this area would be considered a significant cumulative impact. Thus, if the CBP would result in a loss of Important Farmland, impacts would be potentially significant and would be considered cumulatively considerable.

*Cumulative Measure: Implementation of Mitigation Measure **AGF-1** is required.*

Level of Significance After Mitigation: Less than Significant

While the conversion of Important Farmland may occur as a result of cumulative development within the region, cumulative loss of agricultural resources may occur. However, implementation of Mitigation Measure (MM) **AGF-1** would ensure the proposed facilities' contribution to project specific or cumulative farmland impacts would not be cumulatively considerable. If there is a determination of significance, then IEUA would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland.

b) Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

Combined Project Categories

Based on the data available from the counties and the DOC, there is no land within the Chino Basin under Williamson Act Contract. Therefore, none of the facilities and operations proposed under the CBP have a potential to impact such land.

The same circumstance exists for the six cities that no longer include any zoned agricultural land. The proposed project would therefore not conflict with existing land use zoning within those six cities. However, there are five local agencies (the two counties and Chino, Chino Hills, and Eastvale) that still have some land zoned for agricultural. The critical issue for such zoned land is whether such zoned land constitutes "Important Farmlands" in contrast to lower value (from an agricultural perspective) agricultural land, such as grazing land. Where future CBP water facilities or operations are proposed for implementation, a potential exists for impact to Important Farmlands that would conflict with agricultural zoned land. To mitigate potential impacts to zoned

high value agricultural land (important farmland), the following mitigation measure shall be implemented.

Ultimately proposed facilities could potentially be constructed on land that has been zoned for agricultural use, resulting in a conflict with existing zoning at a given site. Construction and operation of CBP facilities with presently unknown locations may convert this land to non-agricultural use. Therefore, impacts would be potentially significant for Project Categories 1, 2, and 4, as they require the installation of physical facilities. No impacts would occur under Project Category 3, as it does not require the installation of physical facilities.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: MM **AGF-1** is required to minimize impacts under this issue*

Level of Significance After Mitigation: Less than Significant

The implementation of MM **AGF-1** includes the need to conduct a LESA Model if a facility is proposed on land designated as important farmland. If there is a determination that the loss of farmland is significant based on the LESA Model, IEUA would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland.

Cumulative Impact Analysis

The cumulative analysis for determining conflicts between the proposed CBP and agricultural zoning and Williamson Act Contracts involves the implementation of CBP facilities. Because land zoned for agriculture is limited within the Chino Basin, the loss of more than 10 acres of important farmland in the area would be considered a significant cumulative impact. Thus, cumulative impacts to agricultural zones may be cumulatively considerable without implementation of mitigation outlined below.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of MM **AGF-1** is required.*

Level of Significance After Mitigation: Less than Significant

The implementation of MM **AGF-2** would ensure the proposed facilities contribution to cumulative impacts on important farmland zoned for agriculture would not be cumulatively considerable by using the LESA Model to determine if a significant farmland impact would occur. If there is a determination of significance, then IEUA would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland, thus reducing the program's contribution to less than cumulatively considerable.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The Chino Basin does not include zoning designations for forest land, timberland, or timberland zoned as Timberland Production. The project area borders the San Bernardino National Forest, but this forest does not overlap with the Chino Basin boundaries.

Combined Project Categories
With no acreage designated for timberland development in the Chino Basin by any of the local jurisdictions, no potential exists to adversely impact timberland through conflicts with such land use designation.

Level of Significance Before Mitigation: No Potential for Significant Impact

Mitigation Measures: None required.

Cumulative Impact Analysis
The proposed CBP would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned as Timberland Production, and therefore, would not contribute to any cumulative effect on forest or timberland.

Level of Significance Before Mitigation: No Impact

Cumulative Measures: None Required

Level of Significance After Mitigation: No Impact

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Combined Project Categories
The southernmost portion of the Chino Basin overlaps with riparian woodland areas along the Santa Ana River, Chino Creek, and Mill Creek, and in the Prado Basin. Certain areas of these riparian woodlands may qualify as forest land based on the definition cited at the beginning of this subchapter. Other than these specific areas, no contiguous area of forest land occurs in the Chino Basin. Further, no jurisdictions have designated areas within their jurisdiction with zoning designations for forest land. The Chino Basin area borders the San Bernardino National Forest, but this forest does not overlap with the Basin itself. Therefore, no impact would occur.

While it is unlikely, there would be a minor potential for CBP facilities to impact riparian woodland that might qualify as "forest land." It is not possible to quantify the extent of impacts at this stage of the review because many site locations have not yet been identified. However, all projects in the remainder of the Basin (outside of the southernmost portion of the Basin identified above) would not result in the loss of forest land or conversion of forest land to non-forest use, and therefore, would not contribute to any effect on forest or timberland losses from CBP implementation. However, given that there is minimal potential for the CBP facilities to impact lands that might qualify as forest land, mitigation is required to reduce impacts to a level of less than significant.

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

AGF-2: For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SR 60), the potential for impacts to riparian woodland/forest land shall be determined prior to final site election. If important forest land cannot be avoided and permanently will exceed 5 acres in area, IEUA shall relocate and avoid the site, or alternatively IEUA shall conduct an evaluation to determine if it qualifies with the State definition of "forest land." If the evaluation determines the permanent loss of important

forestland will occur, IEUA shall provide compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, IEUA may carry out a forest land creation program at a 1:1 ratio for comparable woodland. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented by IEUA.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Prado Basin contains several hundred acres of riparian woodland that may qualify as "forest land." The proposed projects under the CBP could result in the conversion of limited areas in the Prado Basin to support CBP project categories of uses. It is not possible to quantify the extent of impacts at this stage of the review because many site locations have not yet been identified. Therefore, in a manner similar to the site selection and compensation procedure established for important farmland impacts and for analysis purposes, any loss of riparian woodland/forest land would be considered significant if it exceeds five acres total. Note that such woodland is being considered here not for its wetland values, but for its "forest land" impacts. Because land that qualifies as forest land is limited within the Chino Basin, the loss of more than 10 cumulative acres of forest land in the area would be considered a significant cumulative impact. Thus, cumulative impacts to forest land may be cumulatively considerable without implementation of mitigation outlined below.

Level of Significance Before Mitigation: Potentially Significant Impact

*Cumulative Measure: Implementation of Mitigation Measure **AGF-2** is required.*

Level of Significance After Mitigation: Less Than Significant

For all CBP Project Category facilities implemented in the Chino Basin that would impact "forest land/riparian woodland," MM **AGF-2** shall be required when five acres or more of such woodland is impacted in support of CBP projects, which would prevent the project from contributing to a cumulatively considerable regional forestland impact.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion to forest land to non-forest use?

Combined Project Categories

As previously stated, no Williamson Act lands exist within the Chino Basin. Ultimately, the CBP may develop land adjacent to or within agricultural uses, which could contribute to changes within the existing environment which would result in conversion of agricultural or forestry use to non-agricultural or non-forestry use. This is because a limited potential has been identified to convert agricultural land and forest land to water management uses from implementing the CBP in the Chino Basin. In general, the development of infrastructure services existing and future uses within an area or region. As such, development of the CBP facilities would be unlikely to trigger conversion of adjacent agricultural or forestry uses to future CBP facility sites. However, given that the proposed project may result in the conversion of agriculture or forestry uses, the conversion of such uses to non-agricultural or non-forestry uses may be facilitated as a result of large-scale development in highly agricultural or forestry-oriented areas. Therefore, a potentially

significant impact may occur, requiring mitigation identified below to minimize impacts to below significance thresholds.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **AGF-1** and **AGF-2** can be implemented to reduce potentially significant adverse impacts to agricultural, forest, and timber resources to a less than significant impact level.*

Level of Significance After Mitigation: Less Than Significant

The implementation of each mitigation involves avoidance as the first mitigation approach, but provides contingency measures to address impacts that cannot fully avoid these resources. Two of the mitigation measures require tests of onsite resources (the LESA Model or an evaluation to determine whether woodlands qualify as "forest land") to determine whether they qualify as resources of sufficient importance that would require mitigation of potential impacts. These mitigation measures would ensure that, where more than 10 cumulative acres of forestry land is eliminated in order to develop CBP facilities, such uses are replaced with commensurate uses that would ensure such resources are maintained in the region, and that where designated important farmland is located within a proposed CBP site, the LESA Model to determine if a significant farmland impact would occur, and where there is a determination of significance, IEUA would either relocate and avoid the impact, or conduct a follow-on CEQA documentation to assess potential impacts to Important Farmland, thus reducing the program's contribution to less than significant.

Cumulative Impact Analysis

Cumulative development within the Chino Basin could result in the conversion of existing farmlands to non-farmland uses. Therefore, potential significant cumulative farmland conversion impacts could occur. Because the proposed project may result in potential significant farmland and forestry conversion impacts, the project's contribution to the cumulative conversion of farmland may be cumulatively considerable without implementation of mitigation outlined below.

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of Mitigation Measures **AGF-1**, and **AGF-2** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MMs **AGF-1** and **AGF-2** would ensure the proposed facilities would not result in a considerable contribution to a cumulative impact related to converting existing farmland or forest land to a non-agricultural use or non-forest use.

4.3.6 Mitigation Measures

To minimize future impacts related to agricultural and forestry resources from project implementation, the following mitigation measures will be implemented.

AGF-1: For all proposed facilities in the southern portion of the Chino Basin (south of SR 60), the potential for impact to Important Farmlands (Prime Farmland, Farmland of Statewide Importance, or Unique Farmland) shall be determined prior to final site election. If important farmland cannot be avoided and individually exceeds 5 acres or cumulatively

exceeds 10 acres of important farmland lost to agricultural production over the life of the program, IEUA shall provide compensatory mitigation in the form of comparable important farmland permanently conserved in either a local or State-approved important farmland mitigation bank at a mitigation ratio of 1:1. The acquisition of this compensatory mitigation shall be completed within one year of initiating construction of the proposed facility and verification shall be documented by IEUA.

AGF-2: ***For all proposed facilities that may impact riparian woodland/forest land in the portion of the Chino Basin (SR 60), the potential for impacts to riparian woodland/forest land shall be determined prior to final site election. If important forest land cannot be avoided and permanently will exceed 5 acres in area, IEUA shall relocate and avoid the site, or alternatively IEUA shall conduct an evaluation to determine if it qualifies with the State definition of "forest land." If the evaluation determines the permanent loss of important forestland will occur, IEUA shall provide compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank at a mitigation ratio of 1:1. Alternatively, IEUA may carry out a forest land creation program at a 1:1 ratio for comparable woodland. The acquisition or creation of this compensatory mitigation shall be completed/initiated within one year of initiating construction of the proposed facility and verification shall be documented by IEUA.***

Implementation of these measures will reduce potential agriculture and forestry resource impacts to a less than significant impact level.

4.3.7 Cumulative Impacts

While cumulative development within the region may result in cumulatively significant impacts related to loss of and impacts to agricultural and forestry resources, the cumulative analysis of each Agriculture and Forestry Resources issue evaluated in this Subchapter (4.3) of the DPEIR determined that the proposed project would not result in a considerable contribution to cumulative impacts to agricultural and forestry resources within the Chino Basin following implementation of mitigation measures. Therefore, the proposed CBP has a less than significant potential to result in a cumulatively considerable contribution to any significant cumulative agricultural and forestry resources impact.

4.3.8 Unavoidable Adverse Impacts

As determined in the preceding evaluation, with the implementation of mitigation, the proposed project would not result in significant and unavoidable agricultural and forestry resources impacts in the Chino Basin.

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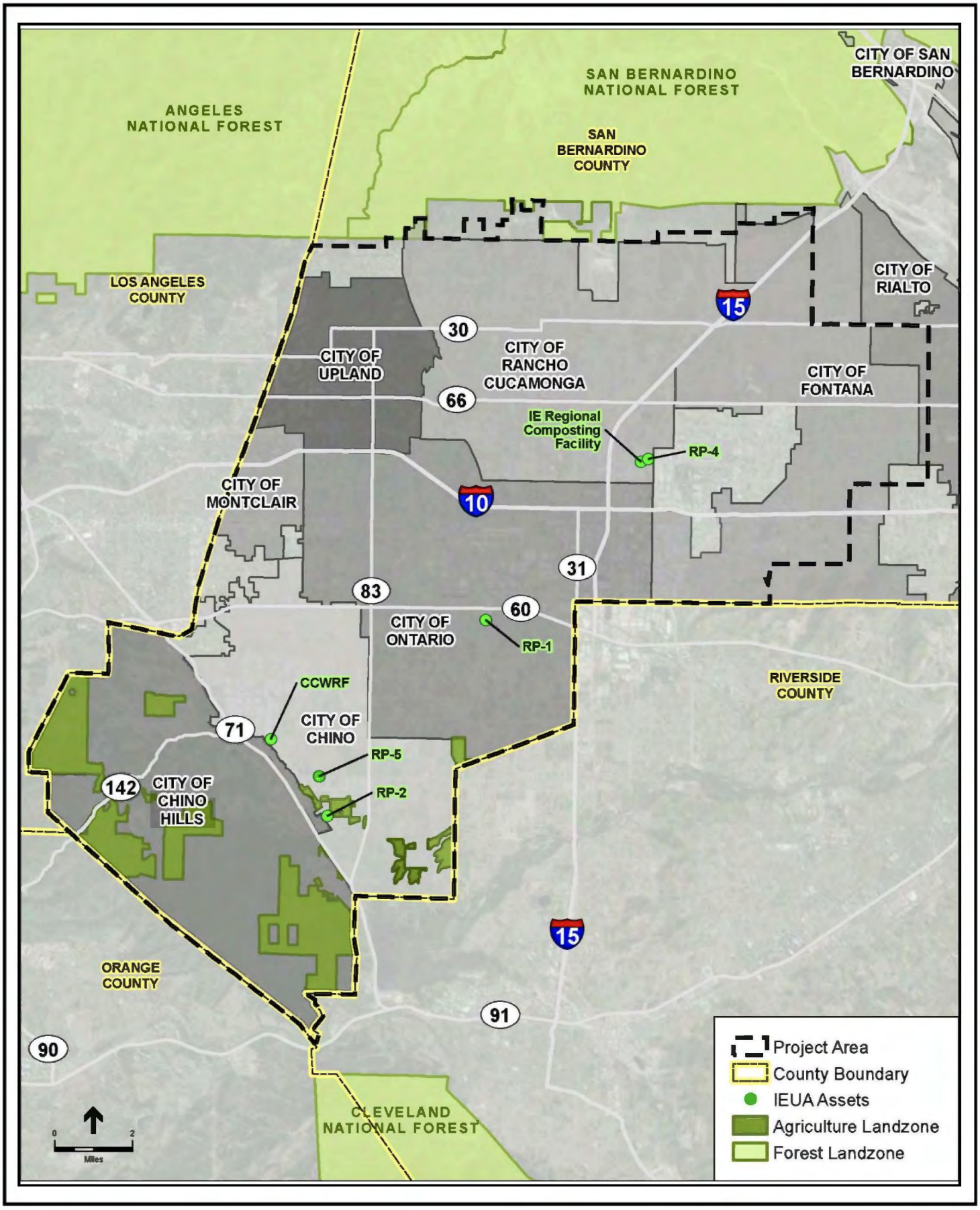

FIGURE 4.3-1

Tom Dodson & Associates
Environmental Consultants

Agriculture and Forest Lane Zones In San Bernardino County

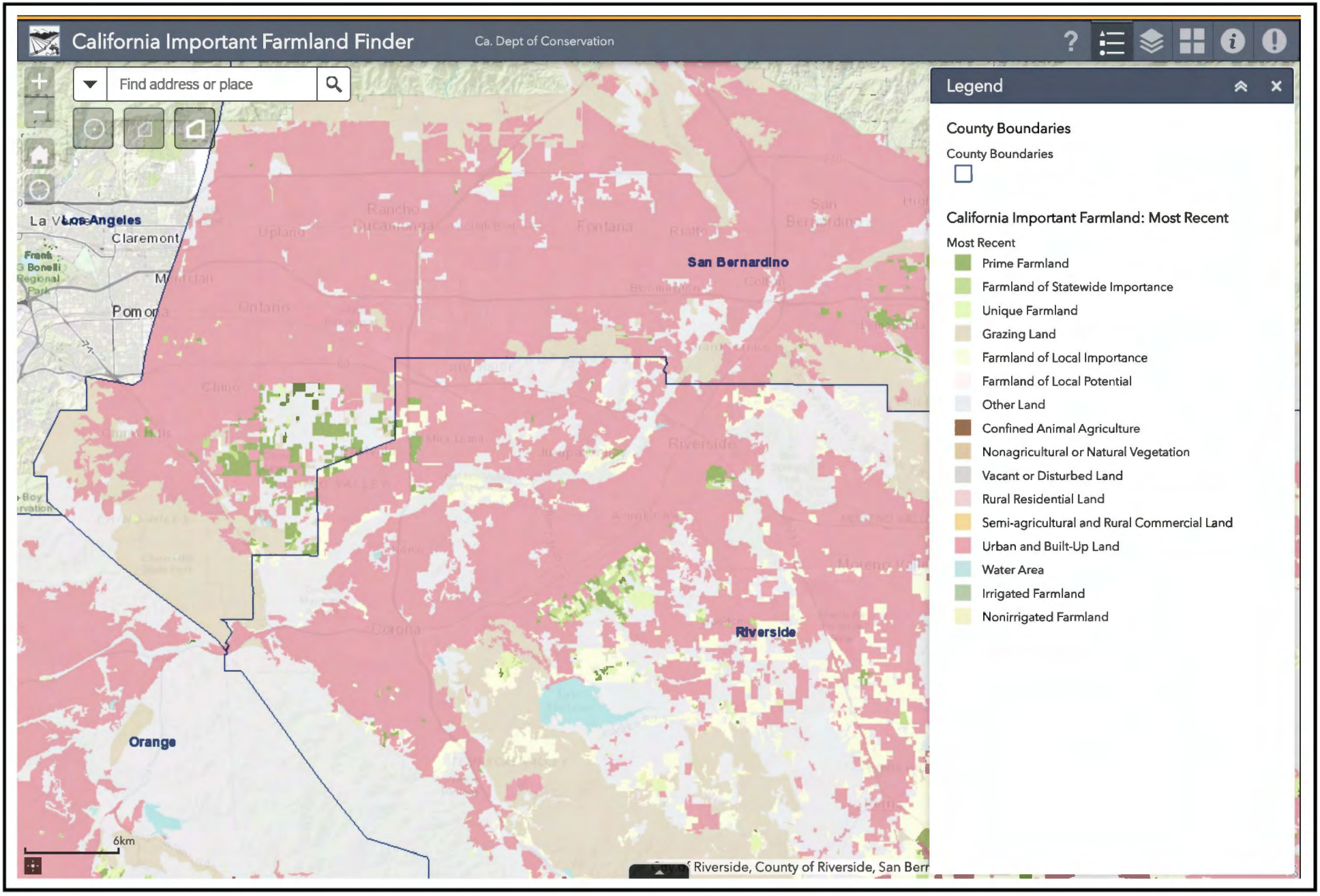

FIGURE 4.3-2

Tom Dodson & Associates
Environmental Consultants

Farmland Designation Map

4.4 AIR QUALITY

4.4.1 Introduction

This section assesses potential impacts to air quality from implementation of the Chino Basin Program (CBP). The Inland Empire Utilities Agency Chino Basin Program Air Quality Technical Report dated October 2021 was prepared by Woodard & Curran to evaluate the potential impacts to air quality associated with construction and operation of the facilities proposed as part of the CBP. A copy of the Air Quality Technical Report is provided as Appendix 5 of Volume 2 to this DPEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Air Quality
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- CARB. 2021. “Air Quality Standards.” https://ww2.arb.ca.gov/resources/background-air-quality-standards (accessed September 2021).
- CARB. 2021. “iADAM Air Quality Data Statistics.” https://www.arb.ca.gov/adam (accessed October 2021).
- CARB. 2021. “Inhalable Particulate Matter and Health (PM2.5 and PM10). https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed September 2021).
- CARB. 2021. “National Ambient Air Quality Standards.” https://ww2.arb.ca.gov/resources/national-ambient-air-quality-standards (accessed September 2021).
- CARB. 2021. “Overview: Diesel Exhaust & Health.” https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed September 2021).
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- CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. https://www.arb.ca.gov/ch/handbook.pdf (accessed October 2021).
- National Highway Traffic Safety Administration. 2020. “Fact Sheet: SAFE Vehicles Rule.” https://www.nhtsa.gov/corporate-average-fuel-economy/safe-fact-sheet (accessed September 2021).
- SCAQMD. 2021. “Frequently Asked Questions: What is CalEEMod and what is it used for?” http://www.aqmd.gov/home/rules-compliance/ceqa/air-qualityanalysis-handbook/frequently-asked-questions (accessed October 2021).
- SCAQMD. 2020. “2019 Annual Report on AB 2588 Air Toxics “Hot Spots” Program.” October. http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588_annual_report_2019.pdf?sfvrsn=30 (accessed October 2021).
- SCAQMD. 2019. “South Coast AQMD Air Quality Significance Thresholds.” Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).
- SCAQMD. 2018-2020. “Air Quality Data Tables.” https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year (accessed October 2021).

- SCAQMD. 2017. Final 2016 Air Quality Management Plan (AQMP). March 3, 2017. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp (accessed October 2021).
- SCAQMD. 2008. Final Localized Significance Threshold Methodology. July 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed September 2021).
- SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
- SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
- U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
- U.S. EPA. 2021. "NAAQS Table." February 10, 2021. https://www.epa.gov/criteria-air-pollutants/naaqs-table (accessed September 2021).
- U.S. EPA. 2020. "Process of Reviewing the National Ambient Air Quality Standards." Last modified: September 1, 2020. https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards (accessed September 2021).
- U.S. EPA. 2013. Policy Assessment for the Review of the Lead National Ambient Air Quality Standards, External Review Draft. https://www3.epa.gov/ttn/naaqs/standards/pb/data/010913_pb-draft-pa.pdf (accessed May 2021).
- Brief for San Joaquin Valley Unified Air Pollution Control District as Amicus Curiae Supporting Respondents, Sierra Club, Revive the San Joaquin, and League of Women Voters Fresno v. County of Fresno and Friant Ranch, L.P. (2018), 6 Cal.5th 502, Case No. S219783.

No comments pertaining to noise were received at the Scoping Meeting held on behalf of the project. One comment letter specific to this topic was received in response to the Notice of Preparation.

Comment Letter #4 from the South Coast Air Quality Management District (SCAQMD) (dated 10/12/21) states:

- *In order to ensure that impacts from the permits are fully and adequately evaluated as required under CEQA Guidelines Section 15096(b), it is recommended that the IEUA initiate consultation with South Coast AQMD.*
- *Staff recommends that the IEUA use South Coast AQMD's CEQA Air Quality Handbook and website as guidance when preparing the air quality and greenhouse gas analyses.*
- *It is also recommended that the IEUA use the CalEEMod land use emissions software*
- *Staff recommends that the IEUA quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds and localized significance thresholds (LSTs) to determine the project's air quality impacts.*
- *The IEUA should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project, including both construction and operational impacts.*
    - *Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unload-ing, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips).*
    - *Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust).*

  - *Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis.*
  - *Emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA operational thresholds to determine the level of significance.*
- *If the project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the IEUA perform a mobile source health risk assessment*
- *In the event that the project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Several resources to assist the IEUA with identifying potential mitigation measures for the project include:*
  - *South Coast AQMD's CEQA Air Quality Handbook*
  - *South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan*
    Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

4.4.2 Environmental Setting: Air Quality

4.4.2.1 South Coast Air Basin

The Chino Basin is located in the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). The SCAB is a 6,745-square-mile region bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County.

4.4.2.2 Regional Climate and Wind Patterns

The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality in the SCAB is primarily influenced by meteorology (e.g., temperature, wind, humidity, precipitation, and amount of sunshine) and a wide range of emission sources, such as dense population centers, substantial vehicular traffic, and industry. The distinctive climate of the project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and

36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Because the ocean effect is dominant, periods of heavy early morning fog are frequent, and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast. More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with the frequency being higher near the coast.

Due to its generally clear weather, about 75 percent of available sunshine is received in the SCAB. The remaining 25 percent is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over Southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

The SCAB experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the North Pacific High pressure system. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion layer (i.e., the upper layer) until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid- to late afternoons on hot summer days. Winter inversions frequently break by mid-morning.[1]

[1] SCAQMD. 2017. Final 2016 Air Quality Management Plan (AQMP). March 3, 2017. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp (accessed October 2021).

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide and nitrogen oxides (NO_X) due to low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.[2]

4.4.2.3 Sources of Air Pollution

Air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.
- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources consist of legally operated vehicles on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles or when wildfires generate smoke containing particulate matter.

4.4.2.4 Air Pollutants of Primary Concern

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[3] nitrogen oxides (NO_X), particulate matter with diameters of up to ten microns (PM_{10}) and up to 2.5 microns ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between VOC and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). The characteristics, sources and effects of criteria pollutants are discussed in the following subsections. The following subsections describe the characteristics, sources, and health and atmospheric effects of air pollutants of primary concern.

[2] Ibid.
[3] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term VOC is used in this EIR.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between NO_X and VOC. VOC are composed of non-methane hydrocarbons (with some specific exclusions), and NO_X is composed of different chemical combinations of nitrogen and oxygen, mainly nitric oxide and nitrogen dioxide. NO_X are formed during the combustion of fuels, while VOC are formed during combustion and evaporation of organic solvents. As a highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high VOC and NOX levels along with abundant sunshine are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant. In addition, because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including changes in breathing patterns, reduction of breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes.[4, 5] Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide is a localized pollutant that is found in high concentrations only near its source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is the incomplete combustion of petroleum fuels by automobile traffic. Therefore, elevated concentrations are usually found only near areas of high traffic volumes. Other sources of carbon monoxide include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces during the winter. The health effects of carbon monoxide are related to its affinity for hemoglobin in the blood. Carbon monoxide causes a number of health problems, including aggravation of some heart diseases (e.g., angina), reduced tolerance for exercise, impaired mental function, and impaired fetal development. At high levels of exposure, carbon monoxide reduces the amount of oxygen in the blood, leading to mortality.[6, 7] Carbon monoxide tends to dissipate rapidly into the atmosphere; consequently, violations of the NAAQS and/or CAAQS for carbon monoxide are generally associated with localized carbon monoxide "hotspots" that can occur at major roadway intersections during heavy peak-hour traffic conditions.

Nitrogen Dioxide

Nitrogen dioxide is a by-product of fuel combustion; the primary sources are motor vehicles and industrial boilers and furnaces. The principal form of NO_X produced by combustion is nitric oxide, but nitric oxide reacts rapidly with the oxygen in the air to form nitrogen dioxide, creating the mixture of nitric oxide and nitrogen dioxide commonly called NO_X. Nitrogen dioxide is an acute irritant that can

[4] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[5] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[6] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[7] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).

aggravate respiratory illnesses and symptoms, particularly in sensitive groups.[8, 9, 10] A relationship between nitrogen dioxide and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility.[11, 12, 13] It can also contribute to the formation of PM_{10} and acid rain.

Sulfur Dioxide

Sulfur dioxide is included in a group of highly reactive gases known as "oxides of sulfur." The largest sources of sulfur dioxide emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of sulfur dioxide emissions include industrial processes such as extracting metal from ore and the burning of fuels with a high sulfur content by locomotives, large ships, and off-road equipment. Sulfur dioxide is linked to a number of adverse effects on the respiratory system, including aggravation of respiratory diseases, such as asthma and emphysema, and reduced lung function.[14, 15]

Particulate Matter

Suspended atmospheric PM_{10} and $PM_{2.5}$ is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $PM_{2.5}$ are directly emitted into the atmosphere as by-products of fuel combustion and wind erosion of soil and unpaved roads. Particulate matter is also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with PM_{10} and $PM_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles while $PM_{2.5}$ is generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. Due to its small size, $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems.[16] More than half of $PM_{2.5}$ that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.[17] Suspended particulates can also reduce lung

[8] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
[9] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[10] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[11] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
[12] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[13] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[14] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[15] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[16] CARB. 2021. "Overview: Diesel Exhaust & Health." https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed September 2021).
[17] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).

function, aggravate respiratory and cardiovascular diseases, increase mortality rates, and reduce lung function growth in children.[18, 19]

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial sources. However, as a result of the U.S. EPA's regulatory efforts to remove lead from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants.[20] As a result of phasing out leaded gasoline, metal processing currently remains the primary source of lead emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. The health impacts of lead include behavioral and hearing disabilities in children and nervous system impairment.[21, 22]

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about 1/70th the diameter of a human hair) and thus is a subset of $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs.[23] Particulate matter emitted from diesel engines contributes more than 70 percent of the air emission cancer risk associated with the on-road heavy-duty sector within the SCAB.[24]

TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

[18] Ibid.
[19] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[20] U.S. EPA. 2013. Policy Assessment for the Review of the Lead National Ambient Air Quality Standards, External Review Draft. https://www3.epa.gov/ttn/naaqs/standards/pb/data/010913_pb-draft-pa.pdf (accessed May 2021).
[21] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[22] U.S. EPA. 2021. "Criteria Air Pollutants." Last modified: August 16, 2021. https://www.epa.gov/criteria-air-pollutants (accessed September 2021).
[23] CARB. 2021. "Inhalable Particulate Matter and Health (PM2.5 and PM10). https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed September 2021).
[24] SCAQMD. 2017. Final 2016 Air Quality Management Plan (AQMP). March 3, 2017. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp (accessed October 2021).

4.4.2.5 Current Air Quality

As discussed further in Section 4.4.3, *Regulatory Setting*, the SCAB is designated nonattainment for the NAAQS for ozone, $PM_{2.5}$, and lead (in the Los Angeles County portion only) as well as the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. The SCAQMD operates a network of air quality monitoring stations throughout the SCAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the NAAQS and CAAQS.

The project site is located within multiple Source Receptor Areas (SRA). The SRAs include the Metropolitan Riverside County (SRA 23), Northwest San Bernardino Valley (SRA 32), Southwest San Bernardino Valley (SRA 33), and the Central San Bernardino Valley (SRA 34).

The most recent three years of data available are shown in **Table 4.4-1**, which identifies the number of days the NAAQS and CAAQS were exceeded in the SCAB, which is considered to be representative of the local air quality in the Chino Basin. As summarized in the table, concentrations of ozone, PM_{10}, and $PM_{2.5}$ frequently exceed the NAAQS and CAAQS. At monitoring stations within Northwestern San Bernardino and Northwestern Riverside County between 2018 and 2020, exceedances of the eight-hour NAAQS and CAAQS for ozone ranged from 52 days in SRA 32 in Northwest San Bernardino Valley to 128 days at SRA 34 in Central San Bernardino Valley. Exceedances of the one-hour ozone CAAQS ranged from 21 days in SRA 23 in Metropolitan Riverside County to 89 days in SRA 34 in Central San Bernardino Valley. For the same area, no exceedances of the federal 24-hour or annual average NAAQS for PM_{10} occurred; however, the overall SCAB experienced one to two days of exceedances of the 24-hour PM_{10} NAAQS per year in the three-year period, and the annual average for the SCAB exceeded the annual average PM_{10} NAAQS in 2018 and 2020. The 24-hour PM_{10} CAAQS was exceeded between three days (five percent of samples) in SRA 24 in Corona/Norco Area and Perris Valley and 130 days (36 percent of samples) at SRA 23 in Metropolitan Riverside County during the three-year period, and the annual average CAAQS for PM_{10} was exceeded at least once at all monitoring stations. The $PM_{2.5}$ 24-hour NAAQS was exceeded between two days (0.6 percent of samples) at SRA 23 in Metropolitan Riverside County and SRA 34 in Central San Bernardino Valley and nine days (2.5 percent of samples) at SRA 23 in Metropolitan Riverside County, and the annual NAAQS and CAAQS for $PM_{2.5}$ were both exceeded at three of the five monitoring stations in both SRAs that recorded $PM_{2.5}$ measurements. The annual CAAQS for NO_2 was also exceeded in 2018 and 2019 within the SCAB but was not exceeded within the SRAs in the Chino Basin, except for in 2018 at SRA 33 adjacent to SR-60 with a value of 0.0304 ppm.[25]

[25] SCAQMD. 2018-2020. "Air Quality Data Tables." https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year (accessed October 2021).

Table 4.4-1
PROJECT AREA AIR QUALITY MONITORING SUMMARY

Pollutant	Standard		2018		2019		2020	
			Maximum Monitored Value	# Days Exceeded	Maximum Monitored Value	# Days Exceeded	Maximum Monitored Value	# Days Exceeded
Ozone	State 1-hour	>0.090 ppm	**0.142 ppm**	**84**	**0.137 ppm**	**82**	**0.185 ppm**	**133**
	State 8-hour	>0.070 ppm	**0.125 ppm**	**141**	**0.117 ppm**	**129**	**0.139 ppm**	**160**
	Federal 8-hour	>0.070 ppm	**0.125 ppm**	**141**	**0.118 ppm**	**126**	**0.140 ppm**	**157**
Respirable Particulate Matter (PM_{10})	State 24-hour	>50 µg/m^3	**126.0 µg/m^3**	**127**	**34.8 µg/m^3**	**110**	**35.8 µg/m^3**	**115**
	State Annual	>20 µg/m^3	**44.6 µg/m^3**	**Exceeded**	**40.9 µg/m^3**	**Exceeded**	**33.9 µg/m^3**	**Exceeded**
	Federal 24-hour	>150 µg/m^3	**230.2 µg/m^3**	**1**	**283.53 µg/m^3**	**2**	**324.73 µg/m^3**	**2**
	Federal Annual*	>150 µg/m^3	**53.5 µg/m^3**	**Exceeded**	47.5 µg/m^3	Not Exceeded	**55.5 µg/m^3**	**Exceeded**
Fine Particulate Matter ($PM_{2.5}$)	State Annual	>12 µg/m^3	16.0 µg/m^3	16	**15.5 µg/m^3**	**15.5**	**16.5 µg/m^3**	**16.5**
	Federal 24-hour	>35 µg/m^3	103.8 µg/m^3	17	**81.3 µg/m^3**	**12**	**175.03 µg/m^3**	**28**
	Federal Annual	>12 µg/m^3	**14.5 µg/m^3**	**Exceeded**	**12.8 µg/m^3**	**Exceeded**	**15.1 µg/m^3**	**Exceeded**
Carbon Monoxide	State 1-hour	>20 ppm	1.9 ppm	0	2.7 ppm	0	1.72 ppm	0
	Federal 1-hour	>35 ppm		0		0		0
	State 8-hour	>9 ppm	1.3 ppm	0	1.1 ppm	0	1.4 ppm	0
	Federal 8-hour	>9 ppm		0		0		0
Nitrogen Dioxide	State 1-hour	>0.180 ppm	0.100 ppm	0	0.100 ppm	0	0.100 ppm	0
	State Annual	>0.030 ppm	**0.032 ppm**	**Exceeded**	**0.032 ppm**	**Exceeded**	0.030 ppm	Not Exceeded
	Federal 1-hour	>0.100 ppm	0.079 ppm	0	0.080 ppm	0	0.081 ppm	1
	Federal Annual	>0.053 ppm	0.030 ppm	Not Exceeded	0.029 ppm	Not Exceeded	0.029 ppm	Not Exceeded
Sulfur Dioxide	State 1-hour	>0.25 ppm	0.029 ppm	0	0.024 ppm	0	0.025 ppm	0
	Federal 1-hour	>0.075 ppm		0		0		0
Sulfates	24-Hour Maximum	>25 µg/m^3	3.9 µg/m^3	0	5.2 µg/m^3	0	3.0 µg/m^3	0

NAAQS = National Ambient Air Quality Standard; CAAQS = California Ambient Air Quality Standard; ppm = parts per million; µg/m3 = micrograms per cubic meter; PM10 = particulate matter measuring 10 microns or less in diameter; PM2.5 = particulate matter measuring 2.5 microns or less in diameter
Notes: *Revoked; Bolded values exceeded the NAAQS or CAAQS standard
Sources:
CARB. 2021. "iADAM Air Quality Data Statistics." https://www.arb.ca.gov/adam (accessed October 2021).
SCAQMD. 2018-2020. "Air Quality Data Tables." https://www.aqmd.gov/home/air-quality/historical-air-quality-data/historical-data-by-year (accessed October 2021)

4.4.2.6 Sensitive Receptors

The NAAQS and CAAQS were established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress as a result of poor air quality, such as children under 14, persons over 65, persons engaged in strenuous work or exercise, and people with pre-existing cardiovascular and chronic respiratory diseases. According to the SCAQMD,

sensitive receptors include residences, long-term health care facilities, rehabilitation centers, convalescent centers, hospitals, retirement homes, and schools, playgrounds, and childcare centers.[26] Sensitive receptors are located throughout and near the Chino Basin and may be located in close proximity to individual construction sites for projects implemented under the CBP, depending on their location.

4.4.2.7 Odors

The SCAQMD's *CEQA Air Quality Handbook* identifies multiple land uses that may cause odors including, but not limited to agricultural uses, wastewater treatment plants, chemical and food processing plants, composting, refineries, landfills, dairies, and fiberglass molding.[27] Potential odor-generating land uses, such as the Pomona Water Reclamation Plant and agricultural uses in Ontario, are located throughout and near the Chino Basin and may be located in close proximity to individual construction sites for projects implemented under the CBP, depending on their location.

4.4.3 Regulatory Setting

4.4.3.1 Federal and State

The following subsections summarize the main federal and State regulations applicable to air quality. Details on other federal and State air quality regulations can be found in Section 3.5 of the Air Quality Technical Report contained in Appendix 5 of Volume 2 to this DPEIR.

Federal and California Clean Air Acts

The federal Clean Air Act (CAA) governs air quality in the United States and is administered by the U.S. EPA at the federal level. Air quality in California is also governed by regulations under the California CAA, which is administered by CARB at the State level. At the regional and local levels, local air districts such as the SCAQMD typically administer the federal and California CAA. As part of implementing the federal and California CAA, the U.S. EPA and CARB have established ambient air quality standards (AAQS) for major pollutants at thresholds intended to protect public health. An air quality standard is defined as "the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harming public health."[28] Error! Reference source not found. summarizes the CAAQS and the NAAQS. The CAAQS are more restrictive than the NAAQS for several pollutants, including the one-hour standard for carbon monoxide, the 24-hour standard for sulfur dioxide, and the 24-hour standard for PM_{10}.

[26] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).
[27] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
[28] CARB. 2021. "Air Quality Standards." https://ww2.arb.ca.gov/resources/background-air-quality-standards (accessed September 2021).

Table 4.4-2
AMBIENT AIR QUALITY STANDARDS AND BASIN ATTAINMENT STATUS

Pollutant	Averaging Time	California Ambient Air Quality Standards		National Ambient Air Quality Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8-Hour	0.070 ppm	N	0.070 ppm	N
	1-Hour	0.09 ppm	N	--	–
Carbon Monoxide	8-Hour	9.0 ppm	A	9 ppm	A
	1-Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1-Hour	0.18 ppm	A	0.100 ppm	U/A
	Annual Arithmetic Mean	0.030 ppm	A	0.053 ppm	A
Sulfur Dioxide	24-Hour	0.04 ppm	A	0.14 ppm	U/A[1]
	1-Hour	0.25 ppm	A	0.075 ppm	U/A
	Annual Arithmetic Mean	--	–	0.030 ppm	U/A
Particulate Matter – Small (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N	--	–
	24-Hour	50 µg/m^3	N	150 µg/m^3	A
Particulate Matter - Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	N	12 µg/m^3	N
	24-Hour	--	–	35 µg/m^3	N
Sulfates	24-Hour	25 µg/m^3	A	--	–
Lead	Rolling 3-Month Average	--	–	0.15 µg/m^3	N[2]
	30-Day Average	1.5 µg/m^3	A	--	–
Hydrogen Sulfide[3]	1-Hour	0.03 ppm (42 µg/m^3)	A	--	–
Vinyl Chloride (Chloroethene)[3]	24-Hour	0.010 ppm (26 µg/m^3)	A	--	–
Visibility Reducing Particles[3]	8-Hour (10:00 to 18:00 PST)	--	No information available	--	–

A = attainment; N = nonattainment; U = unclassified; ppm=parts per million; µg/m^3=micrograms per cubic meter; PST = Pacific Standard Time
[1] Designation pending.
[2] Partial Nonattainment designation – Los Angeles County portion of the SCAB only for near-source monitors. Expect re-designation to attainment based on current monitoring data.
[3] The project does not include substantial sources of hydrogen sulfide, vinyl chloride, or visibility reducing particles. Ambient air quality standards for these pollutants are provided for informational purposes only; however, these pollutants are not evaluated for the purposes of CEQA.
Sources:
SCAQMD. 2016. "National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin." February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf (accessed September 2021).
CARB. 2021. "Summaries of Historical Area Designations for State Standards." https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations/state-area-designations/summary-tables (accessed September 2021).

California is divided geographically into 15 air basins (of which the SCAB is one) for managing the air resources of the State on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Once a nonattainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. Areas that have been

redesignated to attainment are called maintenance areas. Some areas are unclassified, which means insufficient monitoring data are available; unclassified areas are considered to be in attainment. **Table 4.4-2** presents the attainment status of the SCAB for each of the CAAQS and NAAQS. As shown therein, the SCAB is designated nonattainment for the NAAQS for ozone, $PM_{2.5}$, and lead (in the Los Angeles County portion only) as well as the CAAQS for ozone, PM_{10}, and $PM_{2.5.}$

In accordance with Section 109(b) of the federal Clean Air Act, the national ambient air quality standards (NAAQS) established at the federal level are designed to be protective of public health with an adequate margin of safety. The NAAQS were designed to include an adequate margin of safety to be protective of those segments of the public most susceptible to respiratory distress, such as children under the age of 14, the elderly (over the age of 65), persons engaged in strenuous work or exercise, and people with cardiovascular and chronic respiratory diseases.[29] To derive these standards, the U.S. EPA reviews data from integrated science assessments and risk/exposure assessments to determine the ambient pollutant concentrations at which human health impacts occur, then reduces these concentrations to establish a margin of safety.[30] As a result, human health impacts caused by the air pollutants discussed above may affect people when ambient air pollutant concentrations are at or above the concentrations established by the NAAQS. The closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.[31] Accordingly, ambient air pollutant concentrations below the NAAQS are considered to be protective of human health.[32] The NAAQS and the underlying science that forms the basis of the NAAQS are reviewed every five years to determine whether updates are necessary to continue protecting public health with an adequate margin of safety.[33]

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the U.S. EPA and the National Highway Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The Part One Rule revokes California's authority to set its own GHG emissions standards and zero-emission vehicle mandates in California. On April 30, 2020, the U.S. E.PA and the National Highway Safety Administration published Part Two of the SAFE Vehicles Rule, which revised corporate average fuel economy and carbon dioxide emissions standards for passenger cars and trucks of model years 2021-2026 such that the standards increase by approximately 1.5 percent each year through model year 2026 as compared to the approximately five percent annual increase required under the 2012 standards.[34] To account for the effects of the SAFE Vehicles Rule, CARB released off-model adjustment factors to adjust criteria air pollutant emissions outputs from the EMFAC model.

Construction Equipment Fuel Efficiency Standard

The U.S. EPA sets emission standards for construction equipment. The first federal standards (Tier 1) were adopted in 1994 for all off-road engines over 50 horsepower (hp) and were phased in

[29] U.S. EPA. 2021. "NAAQS Table." February 10, 2021. https://www.epa.gov/criteria-air-pollutants/naaqs-table (accessed September 2021).
[30] U.S. EPA. 2020. "Process of Reviewing the National Ambient Air Quality Standards." Last modified: September 1, 2020. https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards (accessed September 2021).
[31] Brief for San Joaquin Valley Unified Air Pollution Control District as Amicus Curiae Supporting Respondents, Sierra Club, Revive the San Joaquin, and League of Women Voters Fresno v. County of Fresno and Friant Ranch, L.P. (2018), 6 Cal.5th 502, Case No. S219783.
[32] CARB. 2021. "Inhalable Particulate Matter and Health (PM2.5 and PM10). https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health (accessed September 2021).
[33] CARB. 2021. "National Ambient Air Quality Standards." https://ww2.arb.ca.gov/resources/national-ambient-air-quality-standards (accessed September 2021).
[34] National Highway Traffic Safety Administration. 2020. "Fact Sheet: SAFE Vehicles Rule." https://www.nhtsa.gov/corporate-average-fuel-economy/safe-fact-sheet (accessed September 2021).

by 2000. A new standard was adopted in 1998 that introduced Tier 1 for all equipment below 50 hp and established the Tier 2 and Tier 3 standards. The Tier 2 and Tier 3 standards were phased in by 2008 for all equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements, which are contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068 (originally adopted in 69 Federal Register 38958 [June 29, 2004], and most recently updated in 2014 [79 Federal Register 46356]). Emissions requirements for new off-road Tier 4 vehicles were completely phased in by the end of 2015.

California Building Standards Code

The California Code of Regulations (CCR) Title 24 is referred to as the California Building Standards Code. It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. In addition to many other things, the California Building Standards Code's energy-efficiency and green building standards address air quality concerns and are outlined below. The 2019 California Buildings Standards Code (the most recent iteration of the code) was adopted by reference in Calabasas Municipal Code Chapter 15.04. These standards are updated every three years.

Part 6 – Building Energy Efficiency Standards/Energy Code

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC). The 2019 Title 24 standards are the applicable building energy efficiency standards for the project because they became effective on January 1, 2020.

Part 11 – California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The 2019 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers (Tiers I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;[35]
- 65 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of electric vehicle (EV) charging stations in newly constructed attached garages for single-family and duplex dwellings; and

[35] Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

- Designation of at least ten percent of parking spaces for multi-family residential developments as electric vehicle charging spaces capable of supporting future electric vehicle supply equipment.

The voluntary standards require:

- **Tier I:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste with third-party verification, 10 percent recycled content for building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof; and
- **Tier II:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste with third-party verification, 15 percent recycled content for building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar reflective roof.

4.4.3.2 Regional and Local

2016 Air Quality Management Plan

Under State law, the SCAQMD is required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. Each iteration of the SCAQMD's Air Quality Management Plan (AQMP) is an update of the previous plan and has a 20-year horizon. The latest AQMP, the 2016 AQMP, was adopted on March 3, 2017. It incorporates new scientific data and notable regulatory actions that have occurred since adoption of the 2012 AQMP, including the approval of the new federal eight-hour ozone standard of 0.070 ppm that was finalized in 2015. The Final 2016 AQMP addresses several State and federal planning requirements and incorporates new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and meteorological air quality models. The Southern California Association of Governments' (SCAG) projections for socio-economic data (e.g., population, housing, and employment by industry) and transportation activities from the 2016 Regional Transportation Plan/Sustainable Communities Strategy (2016 RTP/SCS) are integrated into the 2016 AQMP. The 2016 AQMP builds upon the approaches taken in the 2012 AQMP for the attainment of federal PM and ozone standards and highlights the significant amount of reductions to be achieved. It emphasizes the need for interagency planning to identify additional strategies to achieve reductions within the timeframes allowed under the federal CAA, especially in the area of mobile sources. The 2016 AQMP also includes a discussion of emerging issues and opportunities, such as fugitive toxic particulate emissions, zero-emission mobile source control strategies, and the interacting dynamics among climate, energy, and air pollution. The 2016 AQMP also demonstrates strategies for attainment of the new federal eight-hour ozone standard and vehicle miles travelled emissions offsets, pursuant to recent U.S. EPA requirements.[36] The SCAQMD is currently preparing the next AQMP iteration, which will be the 2022 AQMP.

South Coast Air Quality Management District Rules and Regulations

To implement the AQMP, the SCAQMD develops and implements rules and regulations for emissions that may be generated by various uses and activities. The rules and regulations detail pollution-reduction measures that must be implemented during construction and operation of projects. Rules and regulations relevant to the project include the following:

[36] SCAQMD. 2017. Final 2016 Air Quality Management Plan (AQMP). March 3, 2017. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp (accessed October 2021).

- Rule 203 (Permit to Operate): This rule requires that a permit to operate be obtained before operation or use any equipment that may cause the issuance of air contaminants. It would apply to portable generators used during construction.
- Rule 401 (Visible Emissions): This rule prohibits the discharge of visible air pollutant emissions from various sources as determined by shade and opacity criteria based on the Ringelmann Chart.
- Rule 402 (Nuisance): This rule prohibits the discharge of quantities of air contaminants or other material that causes injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property.
- Rule 403 (Fugitive Dust Control): This rule includes various requirements to prevent, reduce, and mitigate the amount of particulate matter entrained in the ambient air from man-made fugitive dust sources.
- Rule 1113 (Architectural Coatings): This rule establishes VOC content limits for a variety of architectural coatings, including 50 grams per liter for flat and non-flat coatings.

General Plans

Although local actions have important implications for air quality, regulation of air quality occurs primarily at the federal, State, and regional levels. Local General Plans typically include several policies related to air quality that are directed at participating in regional collaboration with the applicable air district, achieving attainment of NAAQS and CAAQS, implementing the use of the applicable air district's thresholds of significance for CEQA analysis, and ensuring project-level compliance with applicable air district rules.

4.4.4 Thresholds of Significance

The CBP has been evaluated to determine if it will violate an air quality standard, contribute to an existing or projected air quality violation, or determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable NAAQS and CAAQS. Additionally, the CBP has been evaluated to determine consistency with the applicable AQMP, exposure of sensitive receptors to substantial pollutant concentrations, and the impacts of odors. The significance of these potential impacts is described in the following section. The criteria used to determine the significance of potential project-related air quality impacts are taken from Appendix G, Section III, of the CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan?
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
c) Expose sensitive receptors to substantial pollutant concentrations?
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

As stated in the CEQA Guidelines, the significance criteria established by the regional air quality management district or air pollution control district may be relied upon to make significance determinations. The SCAQMD has adopted guidelines for quantifying and determining the

significance of air quality emissions in its *SCAQMD CEQA Air Quality Handbook* and supplemental updates.[37, 38, 39]

4.4.4.1 Regional Significance Thresholds

The SCAQMD recommends the use of quantitative regional significance thresholds to evaluate emissions generated by temporary construction activities and long-term project operation in the SCAB, which are shown in **Table 4.4-3**. Project-level significance thresholds established by local air districts set the level at which a project would cause or have a cumulatively considerable contribution to an exceedance of a federal or State ambient air quality standard. Therefore, if a project's air pollutant emissions exceed the significance thresholds, the project could cause or contribute to the human health impacts described under Section 4.4.2.3, Air Pollutants of Primary Concern. For example, SCAQMD has set its operational significance threshold for VOCs based in part on the significance level for stationary sources of emissions established by Section 182(e) of the federal Clean Air Act. SCAQMD developed its other significance thresholds "based on scientific and factual data that is contained in the federal and State Clean Air Acts."[40]

Table 4.4-3
SCAQMD REGIONAL SIGNIFICANCE THRESHOLDS

Construction Thresholds	Operational Thresholds
75 pounds per day of VOC	55 pounds per day of VOC
100 pounds per day of NO_X	55 pounds per day of NO_X
550 pounds per day of CO	550 pounds per day of CO
150 pounds per day of SO_X	150 pounds per day of SO_X
150 pounds per day of PM_{10}	150 pounds per day of PM_{10}
55 pounds per day of $PM_{2.5}$	55 pounds per day of $PM_{2.5}$

VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X =sulfur oxides; PM_{10} = particulate matter measuring 10 microns or less in diameter; $PM_{2.5}$ = particulate matter measuring 2.5 microns or less in diameter
Source: SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).

4.4.4.2 Localized Significance Thresholds

In addition to the regional thresholds discussed above, the SCAQMD has developed Localized Significance Thresholds (LSTs) in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the *CEQA Air Quality Handbook*.[41] LSTs were devised in response to concern regarding exposure of individuals to criteria pollutants in local communities and have been developed for NO_X, carbon monoxide, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance

[37] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
[38] SCAQMD. 2008. Final Localized Significance Threshold Methodology. July 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed September 2021).
[39] SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).
[40] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.
[41] SCAQMD. 1993. CEQA Air Quality Handbook. November 1993.

of the most stringent applicable federal or State ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), distance to the sensitive receptor, and project size. LSTs only apply to emissions in a fixed stationary location and are not applicable to mobile sources, such as cars on a roadway.[42] As such, LSTs are typically applied only to construction emissions because the majority of operational emissions are associated with project-generated vehicle trips. The LSTs for construction activities are based on the results of air dispersion modeling that calculated NO_X and carbon monoxide exhaust emissions from construction equipment and fugitive dust emissions from ground disturbance for construction sites that measure one acre or less, between one to two acres, or between two and five acres in size.[43]

The Chino Basin is located partially within SRA 32 (Northwest San Bernardino Valley), SRA 33 (Southwest San Bernardino Valley), and partially within SRA 34 (Central San Bernardino Valley).[44] Of these, the LSTs for SRA 34 are the most restrictive and are therefore utilized in this analysis. Individual construction sites for projects implemented under the CBP would vary in size and would typically be between one and five acres in size. Furthermore, given realistic construction practices, the active area of ground disturbance and/or heavy equipment usage during construction at any one site would not be expected to exceed five acres of the construction site at once. Therefore, it is appropriate to use the LSTs for construction sites up to five acres in size for this analysis.[45] This provides a conservative evaluation of project impacts because the LSTs for these sizes of construction sites provide more stringent thresholds for construction emissions as compared to the analysis of emissions over a larger area. In addition, LSTs for the one-acre site should be used for sites that are less than one acre in size.

LSTs are provided for receptors at a range of distances -- from 82 to 1,640 feet (25 to 500 meters) -- from the project site boundary. As described in Section 4.4.2.6, *Sensitive Receptors*, sensitive receptors are located throughout the Chino Basin and therefore could be adjacent to individual construction sites of projects implemented under the CBP. The LSTs provided for receptors at a distance of 25 meters (82 feet) are the most conservative LSTs. However, for the AWPF, the nearest sensitive receptor is located approximately 500 meters from the AWPF. Therefore, the LST for a receptor located 500 meters from a five-acre site is used for the AWPF. LSTs for construction on one-acre and five-acre sites in SRA-34 are shown in **Table 4.4-4**.

[42] SCAQMD. 2008. Final Localized Significance Threshold Methodology. July 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf (accessed September 2021).
[43] Ibid.
[44] Ibid.
[45] Ibid.

Table 4.4-4
SCAQMD LSTs FOR CONSTRUCTION IN SRA 34 (POUNDS PER DAY)

Pollutant	Active One-acre Construction Site for a Receptor within 82 Feet (25 Meters)	Active Five-acre Construction Site for a Receptor within 82 Feet (25 Meters)	Active Five-acre Construction Site for a Receptor within 1,640 Feet (500 Meters)
Gradual conversion of NO_X to NO_2	118	270	778
CO	667	1,746	22,490
PM_{10} - construction	4	14	228
PM_{10} – operation	1	4	55
$PM_{2.5}$ - construction	3	8	113
$PM_{2.5}$ - operation	1	2	28

LST = Localized Significance Threshold; SRA = Source Receptor Area; NO_X = nitrogen oxides; NO_2 = nitrogen dioxide; CO = carbon monoxide; PM_{10} = particulate matter measuring 10 microns in diameter or less; $PM_{2.5}$ = particulate matter measuring 2.5 microns in diameter or less
Source: SCAQMD. 2009. Appendix C – Mass Rate LST Look-up Tables. Last modified: October 21, 2009. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2 (accessed September 2021).

4.4.4.3 Toxic Air Contaminants

The U.S. EPA considers those pollutants that could cause cancer risks between one in 10,000 (1.0×10^{4}) and one in one million (1.0×10^{-6}) for risk management. Proposition 65 (California Health and Safety Code Section 25249.6), enacted in 1986, prohibits a person in the course of doing business from knowingly and intentionally exposing any individual to a chemical that has been listed as known to the State of California to cause cancer or reproductive toxicity without first giving clear and reasonable warning. For a chemical that is listed as a carcinogen, the "no significant risk" level under Proposition 65 is defined as the level that is calculated to result in not more than one excess case of cancer in 100,000 individuals (1.0×10^{-5}). The SCAQMD recommends the use of this risk level (also reportable as 10 in one million) as the significance threshold for TACs. The SCAQMD also recommends that the non-carcinogenic hazards of TACs should not exceed a hazard index (the summation of the hazard quotients for all chemicals to which an individual would be exposed) of 1.0 for either chronic or acute effects.[46]

4.4.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP to existing air quality.

Methodology

Air quality criteria pollutant emissions from construction of the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, consistent with guidance

[46] SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).

from SCAQMD.[47] In July 2021, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of CalEEMod version 2020.4.0, which incorporates the latest vehicle emissions standards, construction fleet mix standards, and other applicable regulations. This model has been used to calculate construction-source criteria pollutants (VOCs, NO_X, sulfur oxides, carbon monoxide, PM_{10}, and $PM_{2.5}$) from on-site and off-site (i.e., mobile) sources and quantify applicable air quality reductions achieved from compliance with existing regulations and adherence to mitigation measures.

Model inputs were developed based on information in Chapter 3, Project Description, and default values from the CalEEMod computer program. CalEEMod requires the selection of a land use type, but has limited choices for them (e.g., residential, commercial, industrial, educational, recreational, retail, and parking). The selection of "Industrial - Refrigerated Warehouse, No Rail" as a land use type for the AWPF, wells, pump stations, and wellhead treatment facilities allows for project-specific entries for energy use, construction equipment and vehicle trips. The selection of "Parking - Other Asphalt Surfaces" for the pipelines and turnouts allows for project-specific entries on demolition, construction equipment, construction vehicle trips, and resurfacing and does not have model default operational energy usage or ongoing vehicle trips. The selection of "Industrial - Unrefrigerated Warehouse, No Rail" for the storage tank allows for project-specific entries for construction equipment and vehicle trips, site grading, and facilities construction, without model default operational energy usage or ongoing vehicle trips. It was assumed that construction of all individual projects under the CBP would commence in 2025 and proceed through the start of operations of the AWPF in 2028. In reality, construction of the project components may be phased without overlap; therefore, this assumption represents a conservative "worst case" scenario for maximum daily emissions. It was assumed that individual projects implemented under the CBP would incorporate construction best management practices that are required by State law, such as compliance with the State's Portable Equipment Registration Program, CARB's Regulation for In-Use Off-Road Diesel Vehicles, CARB's Regulation of In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles, and Title 13 California Code of Regulations Section 2449(d)(3) and Section 2485, as well as the dust minimization measures required by SCAQMD Rule 403. Outputs from the model runs are provided in Attachment A of the Air Quality Technical Report included as Appendix 5 of Volume 2 to this DPEIR.

Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

SCAQMD's 2016 AQMP is the applicable air quality control plan. A project would conflict with or obstruct an applicable air quality plan if it would lead to population, housing or employment growth that exceeds the forecasts used in the development of the applicable air quality plan. The CBP would involve the replacement of imported water with a local water supply, which would add reliability to the IEUA water portfolio serving existing customers as well as future customers associated with planned growth in the area. Therefore, the proposed CBP would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the AQMP. Furthermore, with implementation of Mitigation Measure (MM) AQ-1 (discussed below under question [b]) and adherence to existing regulations, the proposed CBP would not result in emissions of criteria air pollutants that would conflict with the AQMP regional standards to achieve the federal air quality standards. Therefore, impacts related to the applicable air quality control plan would be less than significant with mitigation incorporated.

[47] SCAQMD. 2021. "Frequently Asked Questions: What is CalEEMod and what is it used for?" http://www.aqmd.gov/home/rules-compliance/ceqa/air-qualityanalysis-handbook/frequently-asked-questions (accessed October 2021).

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

*Mitigation Measures: MM **AQ-1** (see discussion below under question [b]) is required to minimize impacts under this issue.*

Level of Significance After Mitigation: Less Than Significant.

Impacts would be less than significant with mitigation incorporated.

b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Short-term Construction Emissions

Emissions of criteria air pollutants during construction of individual projects under the proposed CBP would result from the use of construction equipment with internal combustion engines and off-site vehicles to transport workers, deliver materials to the site, and haul demolition and soil/fill material to and from the site. Consistent with SCAQMD guidance, maximum daily construction-related VOC, NO_x, carbon monoxide, sulfur oxide, PM_{10}, and $PM_{2.5}$ emissions from demolition, site preparation, grading, infrastructure installation, building construction, paving, and other activities have been quantified for each year of construction activities and compared to the regional significance thresholds for construction-related emissions. Maximum daily emissions associated with buildout of the proposed CBP are shown in **Table 4.4-5** for each of the three years of construction. As shown therein, the highest maximum daily emissions in a given year would occur in 2027 because this is the year in which simultaneous construction activities would be the most intensive with construction underway for the storage reservoir, AWPF, pump stations, wellhead treatment facilities, turnouts, pipelines, and wells.[48] As shown in **Table 4.4-5**, VOC, carbon monoxide, sulfur oxide, PM_{10}, and $PM_{2.5}$, emissions would not exceed the maximum daily thresholds. However, maximum daily NO_X emissions would exceed the SCAQMD regional significance threshold throughout the entire duration of project construction. Therefore, impacts would be potentially significant, and implementation of MM **AQ-1** would be required.

Table 4.4-5
MAXIMUM DAILY CONSTRUCTION EMISSIONS (LBS/DAY)

Year	NOx	VOC	CO	SOx	PM2.5	PM10
2025	154	14	127	1	15	30
2026	224	22	189	1	22	45
2027	280	31	238	1	29	57
Threshold	*100*	*75*	*550*	*150*	*55*	*150*
Threshold Exceeded?	**Yes**	**No**	**No**	**No**	**No**	**No**

lbs/day = pounds per day; NO_X = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide; SO_X =sulfur oxides; PM_{10} = particulate matter measuring 10 microns or less in diameter; $PM_{2.5}$ = particulate matter measuring 2.5 microns or less in diameter
Notes: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number. Values are taken from the "mitigated" CalEEMod output tables for PM2.5 and PM10 to represent emissions generated with implementation of the dust control measures required by SCAQMD Rule 403. See CalEEMod output sheets in Attachment A of Appendix 5, Volume 2 of this DPEIR.

[48] In 2025, construction activities would include the wells and pipelines, and in 2026, the wells, pipelines, and turnouts would be under construction.

Long-term Operational Emissions

Long-term operation of individual projects implemented under the CBP would involve occasional operations and maintenance trips and increased energy consumption to operate the AWPF, wellhead treatment facilities, pump stations, and injection and extraction wells. No overlap between construction and operation is anticipated to occur. While emissions of criteria pollutants would result from motor vehicle trips associated with maintenance and operation of the CBP facilities, these emissions would be negligible because, once constructed, CBP facilities would be largely monitored remotely and based on current experience, are estimated to require no more than five to six trips per day, on average, for inspections, testing, and maintenance.

Operational electricity consumption would not result in direct project emissions of criteria air pollutants. Only direct emissions of criteria pollutants from energy sources that combust on-site, such as natural gas, are attributed to individual projects. None of the individual projects implemented under the proposed CBP would result in the combustion of natural gas on-site. Criteria pollutant emissions from the power plants that would provide electricity to CBP facilities are associated with the power plants themselves, which are stationary sources permitted by air districts and/or the U.S. EPA, and are subject to local, state and federal control measures. Thus, emissions of criteria pollutants related to electricity consumption are not attributable to individual projects.

Therefore, operational emissions of criteria air pollutants would be minimal and would not have the potential to exceed the SCAQMD regional significance thresholds. As such, project operation would not result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment, and impacts would be less than significant. This conclusion will be verified for each individual project as they are considered for implementation in the future.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

AQ-1: ***IEUA shall require its contractor(s) to use off-road equipment that meets the U.S. EPA certified Tier 4 Final engines or engines that are certified to meet or exceed the emission ratings for U.S. EPA Tier 4 Final or Interim engines such that average daily nitrogen oxide (NO_X) emissions are verified to be below the SCAQMD regional significance threshold of 100 pounds per day.***

Level of Significance After Mitigation: Less Than Significant.

IEUA may choose to meet the performance standard of MM **AQ-1** in a variety of ways. For example, IEUA may choose to require its contractor(s) to utilize a fleet in which 75 percent of the construction equipment and vehicles, with the exception of drill rigs, used for construction activities are equipped with Tier 4 Final engines. As shown in **Table 4.4-6**, implementation of this scenario to achieve the performance standard of MM **AQ-1** would reduce maximum daily construction emissions of NO_X to below the SCAQMD regional significance threshold. Therefore, with implementation of MM **AQ-1**, construction of CBP facilities would not result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment, and impacts would be less than significant.

Table 4.4-6
MITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS (LBS/DAY)

Year	NOx	VOC	CO	SOx	PM2.5	PM10
2025	59	5	141	1	15	30
2026	75	7	211	1	22	45
2027	92	19	265	1	29	57
Threshold	*100*	*75*	*550*	*150*	*55*	*150*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

lbs/day = pounds per day; NO_X = nitrogen oxides; VOC = volatile organic compounds; CO = carbon monoxide; SO_X =sulfur oxides; PM_{10} = particulate matter measuring 10 microns or less in diameter; $PM_{2.5}$ = particulate matter measuring 2.5 microns or less in diameter
Notes: Emissions represent the maximum of winter or summer and are rounded to the nearest whole number. Values are taken from the "mitigated" CalEEMod output tables for PM2.5 and PM10 to represent emissions generated with implementation of the dust control measures required by SCAQMD Rule 403. See CalEEMod output sheets in Attachment A of Appendix 5, Volume 2 of this DPEIR.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

As discussed in Section 4.4.2.6, *Sensitive Receptors*, sensitive receptors include residences, long-term health care facilities, rehabilitation centers, convalescent centers, hospitals, retirement homes, and schools, playgrounds, and childcare centers.[49] Sensitive receptors are located throughout and near the Chino Basin and may be located in close proximity to individual construction sites for projects implemented under the CBP, depending on their location.

Criteria Air Pollutant Emissions – Construction

Construction of individual projects under the proposed CBP would generate localized emissions of criteria air pollutants that may impact sensitive receptors, depending on their proximity to individual construction sites. The SCAQMD LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable NAAQS or CAAQS at the nearest sensitive receptor. Therefore, projects that conform to the LSTs are assumed to have a less than significant impact on nearby sensitive receptors. The following subsections discuss the potential for individual projects under each project category to result in significant impacts related to the exposure of sensitive receptors to substantial concentrations of criteria air pollutants.

Project Category 1

As described in Chapter 3, *Project Description*, Project Category 1 includes injection, extraction, and monitoring wells, which would primarily be constructed on sites less than one acre in size. **Table 4.4-7** summarizes estimated maximum daily on-site emissions generated by construction activities for individual projects under Project Category 1 and compares emissions to the SCAQMD LSTs. As shown therein, maximum daily on-site emissions would not exceed the SCAQMD LSTs during construction activities, and impacts under Project Category 1 would be less than significant.

[49] SCAQMD. 2005. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. May 6, 2005. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf (accessed September 2021).

Table 4.4-7
MAXIMUM DAILY ON-SITE CONSTRUCTION EMISSIONS – PROJECT CATEGORY 1 (LBS/DAY)

Emissions	NO_X	CO	PM_{10}	$PM_{2.5}$
Injection, Extraction, and Production Wells	14	13	2	1
LSTs for One-Acre Site for Receptor at 82 Feet	*118*	*667*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**

lbs/day = pounds per day; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter measuring 10 microns in diameter or less; $PM_{2.5}$ = particulate matter measuring 2.5 microns in diameter or less; LST = Localized Significance Threshold

Project Category 2

As described in Chapter 3, *Project Description*, Project Category 2 includes pipelines, turnouts, pump stations, and a reservoir, which would primarily be constructed on sites between one to three acres in size with the exception of the reservoir that would be constructed on a larger site up to five acres in size. **Table 4.4-8** summarizes estimated maximum daily on-site emissions generated by construction activities for individual projects under Project Category 2 and compares emissions to the SCAQMD LSTs. As shown therein, maximum daily on-site emissions would not exceed the SCAQMD LSTs during construction activities, and impacts under Project Category 2 would be less than significant.

Table 4.4-8
MAXIMUM DAILY ON-SITE CONSTRUCTION EMISSIONS– PROJECT CATEGORY 2 (LBS/DAY)

Emissions	NO_X	CO	PM_{10}	$PM_{2.5}$
Pipelines	2	1	<1	<1
Turnouts	22	20	4	2
Pump Stations	12	9	3	2
LSTs for One-Acre Site for Receptor at 82 Feet	*118*	*667*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
Reservoirs	15	16	3	2
LSTs for Five-Acre Site for Receptor at 82 Feet	*270*	*1,746*	*4*	*2*
Threshold Exceeded?	**No**	**No**	**No**	**No**

lbs/day = pounds per day; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter measuring 10 microns in diameter or less; $PM_{2.5}$ = particulate matter measuring 2.5 microns in diameter or less; LST = Localized Significance Threshold

Project Category 3

Expanding the safe storage capacity within the Chino Basin would not require additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate localized criteria air pollutant emissions. Therefore, no additional localized air quality impacts related to criteria air pollutant emissions would occur as a result of Project Category 3, and no mitigation is required.

Project Category 4

As described in Chapter 3, Project Description, Project Category 4 includes wellhead treatment facilities and the AWPF. Wellhead treatment facilities would primarily be constructed on sites less than one acre in size, while the AWPF would be constructed on a site up to five acres in size. **Table 4.4-9** summarizes estimated maximum daily on-site emissions generated by construction activities for projects under Project Category 4 and compares emissions to the SCAQMD LSTs. As

shown therein, maximum daily on-site emissions would not exceed the SCAQMD LSTs during construction activities, and impacts under Project Category 4 would be less than significant.

Table 4.4-9
MAXIMUM DAILY ON-SITE CONSTRUCTION EMISSIONS– PROJECT CATEGORY 4 (LBS/DAY)

Emissions	NO_X	CO	PM_{10}	$PM_{2.5}$
Wellhead Treatment Facilities	7	8	<1	<1
LSTs for One-Acre Site for Receptor at 82 Feet	*118*	*667*	*4*	*3*
Threshold Exceeded?	**No**	**No**	**No**	**No**
AWPF	25	18	8	5
LSTs for Five-Acre Site for Receptor at 1,640 Feet	*778*	*22,490*	*228*	*113*
Threshold Exceeded?	**No**	**No**	**No**	**No**

lbs/day = pounds per day; NO_X = nitrogen oxides; CO = carbon monoxide; PM_{10} = particulate matter measuring 10 microns in diameter or less; $PM_{2.5}$ = particulate matter measuring 2.5 microns in diameter or less; LST = Localized Significance Threshold; AWPF = Advanced Water Purification Facility

Combined Project Categories

Although multiple individual projects under the CBP may be constructed simultaneously, each project under construction is not anticipated to be located in such close proximity to other projects under construction that multiple individual projects would affect the same sensitive receptor. Thus, it is unlikely that the combined effects of individual projects under all project categories would result in greater localized air quality impacts related to criteria air pollutant emissions than those evaluated above for each project category. No additional localized air quality impacts related to criteria air pollutant emissions would occur as a result of the combined project categories. As individual site-specific projects are defined in the future, IEUA will monitor locations, and where two or more projects may be in close proximity in both time and location, additional LST screening will be conducted.

Criteria Air Pollutant Emissions - Operation

As discussed under checklist item (b), operation of individual projects under the proposed CBP would result in negligible long-term criteria air pollutant emissions that would not exceed SCAQMD emissions standards. If a project is consistent with the latest adopted AQMP and does not exceed the SCAQMD significance thresholds, it can be assumed that it would not have a substantial adverse impact on public health because the AQMP is designed to be consistent with the federal Clean Air Act and the SCAQMD thresholds are set at the level at which a project would cause or have a cumulatively considerable contribution to an exceedance of a federal or State ambient air quality standard, which are protective of public health (see Section 4.4.3.1, *Federal and State*). Therefore, project operation would not expose sensitive receptors to substantial criteria air pollutant concentrations, and impacts would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant.

Carbon Monoxide Hotspots

A carbon monoxide hotspot is a localized concentration of carbon monoxide that is above the NAAQS and CAAQS for carbon monoxide. Localized carbon monoxide hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local carbon monoxide concentration exceeds the one-hour NAAQS of 35.0 ppm, the one-hour CAAQS of 20 ppm, or the eight-hour NAAQS and CAAQS of 9.0 ppm.

The SCAQMD conducted a detailed carbon monoxide analysis for the SCAB during the preparation of the 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the SCAB that would be expected to experience the highest carbon monoxide concentrations. The highest carbon monoxide concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near Interstate 405 (I-405), which had an ADT of approximately 100,000 vehicles per day. The one-hour concentration of carbon monoxide at this intersection was 4.6 ppm, which is well below the one-hour NAAQS of 35.0 ppm and the one-hour CAAQS of 20 ppm. Moreover, the SCAB has been in attainment of the carbon monoxide NAAQS and CAAQS since 2004.[50] As shown in **Table 4.4-1** in Section 4.4.2.5, *Current Air Quality*, the maximum 8-hour average CO value in the SCAB in 2020 was 1.4 ppm, which is well below the 8-hour carbon monoxide NAAQS and CAAQS of 9.0 ppm. In addition, ongoing staff vehicle trips associated with the CBP based on current experience, are estimated to be minimal with approximately five to six trips per day, on average, for inspections, testing, and maintenance. Based on the low background level of carbon monoxide in the SCAB, continued improvement in vehicle emissions standards for new cars in accordance with State and federal regulations, and the low level of operational carbon monoxide emissions associated with operation of CBP facilities, the CBP would not create new hotspots or contribute substantially to existing hotspots. Therefore, the CBP would not expose sensitive receptors to substantial concentrations of carbon monoxide, and impacts would be less than significant.

Combined Project Categories

Mitigation Measures: No mitigation measures are required.

Significance After Mitigation: Less than Significant

Impacts would be less than significant, and no mitigation is required.

Toxic Air Contaminant Emissions

Construction

Construction-related activities would result in temporary project-generated emissions of DPM exhaust emissions from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM (discussed in the following paragraphs) outweighs the potential non-cancer health impacts and is therefore the focus of this analysis.[51]

[50] CARB. 2021. "Summaries of Historical Area Designations for State Standards." https://ww2.arb.ca.gov/our-work/programs/state-and-federal-area-designations/state-area-designations/summary-tables (accessed October 2021).
[51] CARB. 2020. "Overview: Diesel Exhaust & Health." https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed October 2021).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of individual projects under the proposed CBP would occur over an approximately three-year period. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., three years) is approximately 10 percent of the total exposure period used for 30-year health risk calculations. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk.[52] Furthermore, the maximum PM_{10} and $PM_{2.5}$ emissions would occur during site preparation and grading activities for each individual project, which would only occur for a portion of the overall estimated three-year construction period for buildout of the CBP. PM emissions would decrease for the remaining construction phases because construction activities such as infrastructure installation, building construction, and re-surfacing would require less intensive construction equipment. Additionally, SCAQMD CEQA guidance does not require preparation of a health risk assessment for short-term construction emissions. Moreover, CBP construction sites would be distributed throughout the Chino Basin such that people affected by construction-related TAC emissions generated at one construction site would not be affected by construction-related TAC emissions generated at another construction site should construction activities occur simultaneously. Therefore, the CBP is not forecast to result in the exposure of off-site sensitive receptors to significant amounts of carcinogenic or toxic air contaminant during construction. Impacts would be less than significant.

Operation

The CBP includes construction of facilities that are similar to those at the existing RP-4 site, which do not currently generate substantial sources of TAC emissions that could pose or contribute to a health risk. Specifically, the AWPF would not be treating wastewater but would instead treat recycled water to reduce total dissolved solid concentrations. Likewise, the proposed pipelines, turnouts, storage tank, and wells would be largely monitored remotely, would not require substantial vehicle maintenance trips, and would not introduce a source of TACs such as DPM that could pose or contribute to a health risk. None of the project types proposed by the CBP include the types of facilities mentioned in the SCAQMD Air Toxics "Hot Spots" Program annual reporting.[53] Therefore, the CBP would not result in the exposure of off-site sensitive receptors to significant amounts of carcinogenic or toxic air contaminant during operation. No impacts would occur.

[52] Bay Area Air Quality Management District. 2017. *California Environmental Quality Act Air Quality Guidelines*. May 2017. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en (accessed October 2021).
[53] SCAQMD. 2020. "2019 Annual Report on AB 2588 Air Toxics "Hot Spots" Program." October. http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588_annual_report_2019.pdf?sfvrsn=30 (accessed October 2021).

d) Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

SCAQMD Rule 402 Nuisance, prohibits discharge from any source whatsoever of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety or any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. This rule covers generation of odors. Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations. Under the right meteorological conditions, some odors may still be offensive several miles from the source.[54]

Implementation of the proposed CBP would have the potential to generate odorous emissions during construction activities. Construction activities are not typically sources of nuisance odors, although construction could result in minor amounts of odorous emissions associated with diesel exhaust or evaporation of VOCs from architectural coatings. These smells are largely due to the presence of sulfur and the creation of hydrocarbons during combustion. As shown in Table 4.4- above under question (b), construction would not result in significant emissions of sulfur oxides. Furthermore, construction would be temporary, and equipment would not be located in a single location throughout the construction period. Odorous hydrocarbons tend to dissipate quickly and would only affect receptors in the immediate vicinity, rather than a substantial number of people at any given time. Therefore, construction activities would not result in other emissions, such as odors, adversely affecting a substantial number of people, and impacts would be less than significant.

Operation of individual projects implemented under the proposed CBP, including the AWPF, pump stations, wells, wellhead treatment, pipelines, turnouts, and reservoir, would not result in odor impacts because none of these components include odor-generating components. RP-4, the proposed location of the AWPF, already treats and stores wastewater and recycled water, and IEUA implements odor control measures to prevent odorous emissions. Source water from the wastewater treatment process at RP-4 would be secondary effluent suitable for reuse, and product water from the AWPF would be advance treated recycled water suitable for groundwater replenishment. Neither of these types of treated water has an associated odor. Therefore, project operation would not result in other emissions, such as odors, adversely affecting a substantial number of people, and no impact would occur.

4.4.6 Cumulative Impacts

The geographic scope for the analysis of cumulative impacts of criteria air pollutants and air quality plans is the SCAB. The SCAQMD AQMP addresses cumulative air quality impacts in the SCAB based on future growth predictions based on the General Plans of local jurisdictions. For this reason, development consistent with the applicable General Plan would also be consistent with the AQMP. Cumulative development within the SCAB is not anticipated to result in a significant impact in terms of conflicting with the AQMP because the majority of cumulative projects would be consistent with their respective General Plans and the growth already anticipated under the AQMP and the Southern California Associated Governments (SCAG) Connect SoCal regional planning document. The CBP would serve water supply needs for existing and planned water demand and would not result in or accommodate unplanned growth. Therefore, the CBP, in combination with other cumulative projects would not conflict with or obstruct implementation of the AQMP. No cumulative impact would occur.

[54] CARB. 2005. Air Quality and Land Use Handbook: A Community Health Perspective. https://www.arb.ca.gov/ch/handbook.pdf (accessed October 2021).

The cumulative impact to the SCAB due to criteria air pollution emissions associated with existing basin-wide polluting activities is significant because the SCAB is already classified as nonattainment for ozone, PM10, and PM2.5 (see **Table 4.4-2**). The SCAQMD's CEQA Air Quality Significance Thresholds indicate that any projects in the SCAB with daily construction and/or operational emissions that exceed any of the indicated thresholds in Table **4.4-3** should be considered as having an individually and cumulatively significant air quality impact.[55] With mitigation incorporated, emissions from the CBP would not exceed those regional thresholds even with worst-case maximum daily construction scenarios (see Table **4.4-6**). Therefore, the CBP would not result in a cumulatively considerable contribution to a cumulative air quality impact.

The geographic scope for the analysis of cumulative impacts relative to sensitive receptors is the Chino Basin because sensitive receptors (e.g., residences, schools, and hospitals) are interspersed throughout the area where the proposed CBP facilities would be located. Cumulative growth in the project area would have the potential to result in carbon monoxide hotspots and emissions of diesel particulate matter. However, emissions from CBP construction and operation, including emissions of carbon monoxide and PM2.5, would be below significance thresholds that are designed to protect the health of sensitive receptors. Furthermore, the overall net vehicle trips associated with the CBP would be negligible. Therefore, the CBP would not result in a cumulatively considerable air quality impact on sensitive receptors.

The geographic scope for the analysis of cumulative impacts relative to odorous emissions is the area immediately surrounding the odor source. Objectionable odors are not cumulative in nature because the air emissions that cause the odors disperse rapidly beyond the odor source, making the odor less detectable. Cumulative projects as well as the CBP would be required to comply with SCAQMD Rule 402 (Nuisance). Therefore, the CBP, in combination with other cumulative projects, would not result in a significant cumulative impact associated with odorous emissions.

4.4.7 Unavoidable Significant Impacts

The programmatic evaluation of emissions presented in the preceding analysis demonstrates that, after implementation of the recommended mitigation measures, neither construction nor operation of the proposed CBP would result in any exceedance of thresholds for a criteria air pollutant. Furthermore, the CBP is consistent with the AQMP; air quality impact for project-related LST impacts are considered to be less than significant; and sensitive receptors would not be subject to a significant air quality impact during project construction or operations. Therefore, no unavoidable significant impacts to air quality will result from implementing the proposed CBP.

[55] SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).

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4.5 BIOLOGICAL RESOURCES

4.5.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of biological resources from implementation of the Chino Basin Program Update (CBP). The thresholds analyzed in this Subchapter are derived from Appendix G of the CEQA Guidelines, which identifies the issues that examine whether the proposed Project would have a substantial adverse effect upon biological resources on the proposed project site, as well as any indirect substantial effect upon any biological resources in the Chino Basin.

The Notice of Preparation determined that all of these issue areas would be analyzed in the DSEIR. These issues will be discussed below as set forth in the following framework:

- Introduction
- Environmental Setting: Biological and Physical Conditions of the Chino Basin
- Regional Special Status Species and Habitats of Concern
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Avoidance, Minimization and Mitigation Measures
- Cumulative Impact
- Unavoidable Adverse Impacts

The following references were used in prepared this Subchapter of the DPEIR[1]:

- Jacobs Engineering Group, *Program Biological Resources Report, Optimum Basin Management Program Update for the Chino Basin Watermaster and Inland Empire Utilities Agency*, March 15, 2020
- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report,* May 2021
- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan,* May 2021
- San Bernardino General Plan Biological Resources Report, 2007

Two comment specific to this topic were received in response to the Notice of Preparation and/or scoping meeting held for the proposed project.

Comment Letter #6 from the California Department of Fish and Wildlife (CDFW) (dated 10/14/21) states:

- *The CDFW letter addresses CDFW's role as a trustee and responsible agency.*
- *CDFW recommends that the EIR specifically include:*
  - *An assessment of the various habitat types, and a map that identifies the location of each habitat type.*
  - *A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected.*
  - *A complete, recent inventory of rare, threatened, endangered, and other sensitive species within, as well as any offsite areas with the potential to be affected*

[1] Refer to the listed reference documents for a comprehensive list of references utilized to prepare those reports and used in support of the sections that have been extracted and utilized in support of this Subchapter.

- *CDFW recommends that the EIR utilize a hybrid approach to cumulative impacts, with a list of past, present, and probable future projects/activities being considered in combination with baseline conditions, projections, and adopted planning documents.*
- *The 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are "losing reaches" characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are "gaining reaches" characterized by groundwater discharge. CDFW again urges that this, along with other available data, be used to analyze the potential cumulative impacts of the Program.*
- *CDFW indicates that the EIR should identify mitigation measures and alternatives to avoid or minimize potential impacts to the extent feasible:*
    - *The EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to any project or activity within the Program, or that may be impacted due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors.*
    - *The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from direct and indirect impacts.*
    - *California Species of Special Concern (CSSC) should be considered during the environmental review process.*
    - *CDFW considers adverse impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for these adverse impacts.*
    - *The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values.*
    - *If sensitive species and/or their habitat may be impacted, CDFW recommends the inclusion of specific mitigation in the EIR.*
    - *CDFW recommends that the EIR specify mitigation that is roughly proportional to the level of impacts.*
    - *Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. CDFW outlines what the plans should entail.*
    - *CDFW recommends that the EIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. The EIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site.*
    - *To avoid direct mortality, CDFW recommends that the IEUA condition the EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities.*
    - *CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species*

- *CDFW recommends that the EIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.*
- *CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the PEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments.*
- *To ameliorate the water demands of this Project, CDFW recommends incorporation of water-wise concepts in project landscape design plans.*
- *CDFW requests that the IEUA report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB).*
- *CDFW notes the required filing fees*

Comment Letter #7 from the Orange County Water District (OCWD) (dated 10/14/21) states:

- *OCWD recharges all baseflow of the SAR discharged from Prado Dam, and as such, if the CBP would reduce flows to the SAR, OCWD assumes it will need to increase reliance on imported water.*
- *OCWD states that the EIR should analyze and quantify the biological benefit to Salmonids by accounting for the change in imported water needs of Southern California as a whole as a result of the CBP.*
- *Should the CBP result in the removal of 17,000 AFY of surface water from the Santa Ana River Watershed, biological impacts could occur, and should therefore be sufficiently analyzed to determine whether there would be negative impacts to the Prado Basin riparian habitat. Mitigation should be addressed to ensure specific actions are taken to minimize negative consequences of the CBP.*

Much of the following text is abstracted directly from the Biological Resources Report provided as Appendix 6 of Volume 2 to this DPEIR.

4.5.2 Environmental Setting: Biological and Physical Conditions of the Chino Basin

The Chino Basin is one of the largest groundwater basins in Southern California and has an estimated unused storage capacity of over 1,000,000 acre-feet. The Chino Basin covers approximately 235 square miles within the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. Exhibit 1 shows the location of the Chino Basin within the Upper Santa Ana River Watershed; refer to Chapter 3, Project Description, for the Exhibits included herein. The Chino Basin consists of an alluvial valley that is relatively flat from east to west, sloping from north to south at a one to two percent grade. Basin elevation ranges from about 2,000 feet adjacent to the San Gabriel foothills to about 500 feet near Prado Dam. The Chino Basin is bounded:

- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The principal drainage course for the Santa Ana River watershed is the Santa Ana River. It flows 69 miles across the Santa Ana Watershed from its origin in the eastern San Bernardino Mountains

to the Pacific Ocean. The Santa Ana River enters the Chino Basin at the Riverside Narrows and flows along the southern boundary to the Prado Flood Control Reservoir, where the River flow is eventually discharged through the outlet at Prado Dam and flows the remainder of its course to the Pacific Ocean. The Basin is traversed by a series of ephemeral and perennial streams that include: San Antonio Creek, Chino Creek, Cucamonga Creek, Deer Creek, Day Creek, Etiwanda Creek and San Sevaine Creek. Please refer to **Figure 2** in the Project Description (Chapter 3) for the location of drainages.

These creeks flow primarily north to south and carry significant natural flows only during, and for a short time after, the passage of Pacific storm fronts that typically occur from November through April. IEUA discharges year-round flows to Chino Creek and to Cucamonga Creek Channel (known as Mill Creek south of Pine Avenue) from its Regional Plants. The actual volume of wastewater effluent discharges varies seasonally and is expected to be attenuated in the future by a combination of water conservation measures being implemented by water users and through diversion of flows for delivery as recycled water to future users that can utilize this source of water, including landscape irrigation, industrial operations, and recharge into the Chino Basin ground-water aquifer.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W.

Both the California and Federal endangered species acts provide legislation to protect the habitats of listed species as well as the species itself. If a state or federally listed endangered species is determined to be present, the proposed project may be constrained to avoid, minimize effects, or compensate for impacts to the species. Species specific mitigation measures would thus need to be agreed upon and implemented to the satisfaction of all jurisdictional agencies. These jurisdictional agencies may be some or all of the following: U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board, CDFW, and/or United States Army Corps of Engineers (COE).

The areas in which most project development is anticipated are comprised of a primarily urban setting in the north-central portion of the Basin with agricultural and open space uses located in the southern-most portion of the Basin. A large majority of the approximately 225,000 acres that comprises the Chino Basin has been previously developed or disturbed by human activity. Relatively speaking, very few pristine areas of undisturbed natural habitat remain. The following is a discussion of areas within the Chino Basin that have the largest areas of extant habitat communities or have the most significant biological resources:

The Prado Basin Reservoir area comprises 9,741 acres northwest of Corona and south of Chino. Approximately 4,000 acres of this area can be classified as riparian woodland vegetation, of which 2,000 to 2,500 acres is dense riparian habitat dominated by large stands of willow woodland. This is one of the largest remaining riparian woodland areas in southern California. This area supports a wide array of sensitive species, both floral and faunal. According to the Biological Resources section for the Chino Basin Groundwater Storage Program Draft Environmental Impact Report for Metropolitan Water District of Southern California (MWDSC), a total of 311 species of vascular plants, belonging to 65 families, were identified in the Basin area. Three major vegetational communities occur in this area. First is riparian habitat which occurs in low lying sections of the Basin and along the Santa Ana River and streams running into the Basin. The riparian habitat is

dominated by extensive stands of black willow, and smaller stands of arroyo willow. Several stands of tall cottonwoods and a single stand of sycamore have been identified.

The second habitat type is upland habitat characteristic of coastal sage scrub, plus grasses and exotic weeds. This upland area has been heavily impacted by agriculture and grazing activities. The third major vegetational type is the aquatic and semi-aquatic communities occurring in permanent streams and artificial duck ponds, and intermittently filled reservoirs and streams within the Basin. The wildlife in the riparian area includes a variety of amphibians, mammals, and birds. For an additional discussion of the biological resources identified in the area, please refer to MWDSC Chino Basin Groundwater Storage EIR's biological resource section, as well as Appendix 6 of Volume 2 to this DPEIR, and the referenced Habitat Conservation Plan studies prepared under the San Bernardino Valley Municipal Water District's (SBVMWD) direction.

The Santa Ana River and its tributaries within the Chino Basin are also significant areas for biological resources as they provide refugia and breeding grounds for neotropical migrant species as well as provide habitat linkages and movement corridors connecting various large blocks of relatively undisturbed habitat areas. The MWDSC Chino Basin EIR also reports that many of these tributary streams are proposed to be fully lined as part of flood control activities in the future.

Another significant area for biological resources that lies adjacent to the Chino Basin is Chino Hills State Park that contains approximately 13,000 acres of wild land situated in the hills north of Santa Ana Canyon. Although Chino Hill State Park contains large blocks of non-native grasslands, it also contains riparian habitat comprised of coast live oak and sycamore woodlands. Additionally, this park contains one of the largest remaining stands of Southern California black walnut. This park also functions as an important area for connectivity to and movement between the park along the western the boundary of the project area.

Based on the most recent field surveys of the area and desktop review for Peace II Subsequent Environmental Impact Report (SEIR, 2010), the proposed action area traverses vacant, public land designated as flood control, water conservation and open space. Patches of agricultural, industrial and commercial land uses are evident north of the Prado Dam inundation area (Prado Basin, essentially that portion of the Basin below the 566' elevation which encompasses the area that would be inundated by a 100-year flood).

Prado Basin is dominated by flood plain riparian plant communities, with upland habitats primarily restricted to the perimeter of the Basin. The hydrological conditions in the project area promote the establishment of riparian vegetation. A freshwater marsh habitat component is also present in the project area because standing water is seasonally abundant (during the winter precipitation season) in the Prado Basin upstream of the Prado Dam.

The present biological condition of Prado Basin was created by the construction of Prado Dam in 1941. Prado Dam was built where Chino Creek, Cucamonga Creek (also known as Mill Creek, south of Pine Avenue) and Temescal Wash have their confluence with the Santa Ana River. Due to a combination of the high groundwater table (including rising groundwater), storm flow accumulation held behind the Dam, sewage treatment plant effluent and irrigation runoff, a resultant perennial river flow exists that has created and sustains the extensive wetland habitat in the Basin. Presently, the riparian woodlands in the Basin comprise the largest single stand of this habitat in southern California. Prado Basin supports a myriad of habitat types, including but not exclusive to cottonwood/willow riparian forest, riparian scrubland, herbaceous riparian, freshwater

ponds, freshwater marsh, riverine, sandy wash, fallow fields, agricultural land, ruderal, coastal sage scrub, and oak woodland.

The riparian habitat within the project area is in various seral stages and generally consists of tall, multilayered, open, canopy riparian forests. The dominant vegetative species within this riparian forest include: Eucalyptus, Fremont cottonwood (*Populus fremontii*), black cottonwood, (*P. tremuloides*) and several tree willows (*Salix spp*). Characteristic species, in addition to the eucalyptus and cottonwood, include black willow (*S. goodingii*) narrow-leved willow (*S. exigua*), arroyo willow (*S. lasiolepis*), red willow (*S. laevigata*), sandbar willow (*S. hindsiana*), mulefat (*Baccharis salicifolia*), Sycamore (*Platanus recemosa*) and elderberry (*Sambucus mexicana*).

In addition to the riparian community, there are also freshwater marsh, eucalyptus groves, coastal sage scrub, riverine, grassland, and ruderal communities found within the project area. Cattails and reeds are the dominant species within the freshwater marsh habitat.

4.5.2.1 Plant Communities

A review of San Bernardino and Riverside County general plan documents listed the plant communities shown below as being present in the project area. The general characteristics of the plant communities described below were extracted from the 2007 San Bernardino General Plan Biological Resources Report.

Chaparral
Several different chaparral subtypes occur in San Bernardino County. The most common subtypes in the valley region are southern mixed chaparral, chamise chaparral and scrub oak chaparral. These associations are located predominantly along the lower slopes of the mountains and in the interface zone between valley and mountain regions.

Southern mixed chaparral is composed of broad-leaved sclerophyllous shrubs that grow to about 8-12 feet tall and form dense, often nearly impenetrable stands. The plants of this association are typically deep-rooted. There is usually little or no understory, except in openings; however, considerable leaf litter accumulates. This habitat occurs on dry, rocky often steep north-facing slopes with little soil. It may grade into Riversidean coastal sage scrub at lower elevations, but generally grows on moister and rockier sites. Characteristic shrub species include chamise, toyon and lemonadeberry.

Chamise chaparral is dominated by chamise, almost to the exclusion of all other plants. This habitat occurs on shallower, drier soils or at somewhat lower elevations than mixed chaparral. Chamise has adapted to the characteristic fire cycles of this habitat by stump sprouting. In mature stands, the shrubs are densely interwoven and there is very little herbaceous understory or leaf litter.

Scrub oak chaparral is a dense evergreen association that grows to twenty feet tall and is dominated by scrub oak. This habitat occurs on wetter sites than other chaparral associations, often at slightly higher elevations. These more favorable sites recover from fire more quickly than other chaparral subtypes and substantial leaf litter accumulates. Additional shrub species found in scrub oak chaparral include eastwood manzanita, toyon and mountain mahogany, poison oak and narrow leaf bedstraw.

Other chaparral associations may occur in the Valley region but are more predominant at higher elevations. Such associations include buck brush chaparral, bigpod ceanothus chaparral and interior live oak chaparral.

Chaparral habitats are suitable for burrows and soil nests of many mammal species. Another important feature of this habitat are rock outcrops, which are important for reptiles and as raptor perch sites. No sensitive species of San Bernardino County are directly dependent upon chaparral habitat. However, sensitive faunal species from adjacent coastal sage scrub habitat may utilize chaparral as a corridor or for foraging. These species may include Stephens' kangaroo rat, Los Angeles pocket mouse, and San Diego horned lizard.

The following was extracted from the California Native Plant Society (CNPS) database,

Coastal sage scrub
Coastal sage scrub in the valley region is classified as Riversidean sage scrub, the most xeric expression of coastal sage scrub south of Point Concepcion (Holland 1986). This habitat grows on steep slopes with severely drained soil and dominant species are relatively shallow-rooted shrubs, seldom over four feet tall.

Riversidean Alluvial Sage Scrub is a variation of Riversidean sage scrub which also exists in the valley region. This vegetation type is the dominant habitat of the Upper Santa Ana River floodplain and also occurs in the Cajon and Lytle washes (CNDDB, 2020).

Coastal sage scrub habitat in Southern California is decreasing rapidly as a result of urbanization. Evidence of its decline is the growing number of declining plants often associated with it. In the valley region of San Bernardino County, three state and/or federally listed endangered species are known to occur in association with the coastal sage scrub: slender-horned spineflower (Centrostegia lepoceras), Santa Ana River woolly star (Eriastrum densifolium spp. sanctorum), and Nevin's barberry (Berberis nevinii). Additionally, Pringles monardella is federally listed as a Category I species, while Payson's jewelflower and California bedstraw are category 2 species.

San Bernardino kangaroo rat, a federally listed endangered species; and Stephens' kangaroo rat, a state-listed threatened species and federally listed endangered species are also known to have their habitat associated with this community type in the Valley area. Los Angeles pocket mouse is federally listed as a Category 2 species and a species of special concern by the state. The Los Angeles pocket mouse has been found in San Bernardino County near the Cajon Wash, north of Etiwanda and San Bernardino and in Reche Canyon...The Valley region of San Bernardino County represents the northern limit of the range of the whiptail and coastal California gnatcatcher, a federally listed threatened species. Currently the U.S. Fish and Wildlife Service has proposed critical habitat for this species.

Deciduous woodlands
California walnut woodland is a rather specialized woodland habitat restricted to the Chino Hills and Etiwanda area within the Valley region. This woodland, which occurs among rocky outcrops integrating with scrub habitat or on more mesic sites integrating with canyon live oak woodland, is dominated by California walnut; associated species include canyon live oak, Engelman oak, sugar bush, and squaw bush. California walnut woodland is considered a sensitive habitat due to its small acreage and limited distribution in the county; no sensitive floral species are solely dependent on this woodland habitat for their life cycle, however. No

federal or state sensitivity listing exists for the live oak, walnut or for any other species associated with California walnut woodland. Animals associated with California walnut woodland are similar to the species that would utilize oak woodland. These include Anna's hummingbird, acorn woodpecker, Nuttall's woodpecker, deer mouse, California ground squirrel, striped skunk, and coyote. No sensitive animals as listed by the USFWS or CDFG are dependent on California walnut woodland within the valley region in San Bernardino County.

Grasslands

The disturbed grasslands of the valley region of San Bernardino County are a heterogeneous complex that may be associated with shrubs or trees on land that has been disturbed or altered by development or fire. Non-native weedy vegetation is common in this habitat and includes slender wild oats, foxtail fescue, ripgutgrass, short-pod mustard, red-stem filaree, and pin-clover. One sensitive plant species may occur in the grassland areas of the northern Valley area of San Bernardino County, Orcutt's brodiaea. This species, which is seriously threatened by development, may be found in valley/foothill grasslands, cismontane woodlands and vernal pool habitats. Birds of prey utilize grassland areas for foraging. Locally breeding raptor species include black-shouldered kite, red-tailed hawk, red-shouldered hawk, great horned owl, and barn owl, Other faunal associates include house mouse, southern grasshopper mouse, and gopher snake. No sensitive animal species are expected to utilize the grassland areas of the valley region of San Bernardino County.

Wetlands (Mapped on Figure 4.5-1)

Wetland communities are areas of land which are either permanently or seasonally wet and support vegetation that is specifically adapted for saturated soil conditions. These areas include riparian areas and marshes, where moisture is at or near the surface, and often include intermittent drainages. In southern California, wetland habitats are declining and are considered sensitive. Wetlands are further subject to state and federal regulations that include the federal Clean Water Act (Section 404); Section 401 of the Clean Water Act is administered by the State and/or Regional Boards; and the CDFW Streambed Alteration Agreement (Section 1600 of the Fish and Game Code). A number of stream channels flow through the valley region of San Bernardino County including Cucamonga Creek, Cajon and Lytle Creek washes, and Santa Ana River. Where water is present near the surface in stream channels, a riparian woodland community can be maintained. In stream channels with intermittent surface or groundwater availability, a riparian scrub community may also develop. Both of these communities exist in the valley region. Dominant woodland tree species include Fremont cottonwood, arroyo willow and black willow with western sycamore on the upper terraces. Common shrubs include mulefat, California mugwort, poison oak and coyote bush. A well-developed stand of riparian woodland occurs in the Prado Basin of San Bernardino County and extends into Riverside County. Remnant riparian woodlands also occur in less frequently flooded areas such as the Santa Ana Wash area.

A freshwater marsh is located north of Etiwanda in the Day Canyon wash area. Freshwater marsh also occurs in the Prado Basin and may occur in the other drainages of the valley region, wherever moisture is at or near the surface for a long duration during the growing season. This habitat is usually dominated by perennial emergent species 4 to 7 feet tall. Stands of bulrushes or cattails often characterize this habitat. Also, large stands of the non-native pest plant giant reed grass (Arundo) occur along much of the basin's riparian areas. This giant reed grass not only takes over native riparian communities, but it also uses a tremendous amount of water.

These Riparian resources serve as important habitat, as water sources, and as movement corridors for wildlife. This habitat type also supports numerous sensitive animal species including least Bell's vireo, a state and federally listed endangered species; southwestern willow flycatcher, a state and federally listed endangered species; bald eagle, a state and federally endangered species; western yellow-billed cuckoo, a state listed threatened species; long eared owl, a species of special concern and the California black rail, a state listed threatened species. The cuckoo and vireo occur in the dense riparian habitat of the Prado Basin in Riverside County but apparently have been extirpated from the valley region of San Bernardino County. The black rail, dependent on marshes, was recorded long ago at Chino but is not known to occur currently in San Bernardino County.

4.5.2.2 Physical Conditions

The local climate is characterized by hot summers, mild winters and rainfall, which occurs almost entirely in the winter and early spring months. The average annual rainfall is about 19 inches. The climate is somewhat affected by the moderating effects of the Pacific Ocean. Average temperatures range from a minimum of 39 degrees Fahrenheit in January to an average of 91 degrees Fahrenheit in July. Winds occur from all directions, and onshore winds from the west/southwest occur during the day. At night, wind patterns reverse with an offshore flow generally coming from the east/northeast.

The five Management Zones are bordered by various waterways, such as the Santa Ana River along the southeast alignment of Management Zone 5, Chino Creek coursing northwest to southeast along the western border of Management Zone 1 and having its confluence with the Santa Ana River in Prado Basin in the southern portions of MZ's 1-5, and San Antonio Creek, which passes through MZ's 1 and 2.

Mt. Baldy to the north of the project area channels alluvial and perennial flows through several smaller waterways, which fill reservoirs (Puddingstone Reservoir in the northeast of MZ 1, Live Oak Reservoir north of MZ 1) and continue their flows into several of the creeks running north to south through the project alignment.

4.5.2.3 Topography and Soils

The majority of the program area is characterized by flat topography through the basin, bordered by hilly to mountainous terrain. The elevation ranges from approximately 500 feet above mean sea level (amsl) at the extreme southern portion of the Basin to 1,200 feet amsl along the foothills leading to the adjacent mountains. General soil maps (NRCS, Web Soil Survey, January 2020) identify numerous soil associations (distinctive patterns of soils in defined proportions) in the program area. An overview of topography and soil is presented in the following section. Once specific CBP facilities are designed and sited, more specific soil mapping and site investigations would be prepared for those specific facilities.

Table 4.5-1
SOIL TYPES IN THE PROGRAM AREA

Management Zone	Map Unit Name	Map Unit Name
1	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Ramona-Hanford-Greenfield-Gorgonio (well- to excessively drained, low to medium runoff, moderately slow to rapid permeability, 0-30% slope)
	Soper-Fontana-Calleguas-Balcom-Anaheim (well-drained, low to high runoff, slow to moderate permeability, 5 to 75% slope)	
2	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Ramona-Hanford-Greenfield-Gorgonio (well- to excessively drained, low to medium runoff, moderately slow to rapid permeability, 0-30% slope)
	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)	
3	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Sesame-Rock outcrop-Cieneba (well to excessively drained, low to very rapid runoff, moderate to slow permeability, 0-85% slope)
	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)	
4	Sesame-Rock outcrop-Cieneba (well to excessively drained, low to very rapid runoff, moderate to slow permeability, 0-85% slope)	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)
5	Urban land-Monserate-Exeter-Arlington (moderately well to well drained, slow to rapid runoff, slow to moderate permeability, 0 to 9% slope)	Urban land-Tujunga-Soboba-Hanford (well to somewhat excessively drained, negligible to low runoff, moderate to rapid permeability, 0-15% slope)

The preceding list summarizes the general soil types identified in the CBP project areas, which consists of disturbed urban land, alluvial deposits, and distinct soil series along the more rocky terrain. Most of the soils in the inventory area formed from alluvial, sedimentary, and meta-sedimentary sources and have been formed in concert with the complex geologic history of the CBP area. Many areas to the south of the primary program areas have been intensely urbanized and/or altered to produce crops.

4.5.2.4 Biological and Physical Conditions of the Study Areas

This section describes the existing biological and physical conditions of the Study Areas. Areas with natural vegetation and wetlands are most prevalent in the lower 20 percent of the management zones, in particular Chino Creek to the southwest of and within MZ 1 and the Santa Ana River to the southeast and within MZ 1 and MZ 5. Native plants are uncommon in the program area and are generally limited to the wetland and streambed areas in the program area. Most of the land area in the five Management Zones is developed. The lack of native vegetation throughout the majority of the CBP areas of focus is a result of a history of industrial, commercial, agricultural and residential housing development within the program area and associated maintenance and continued construction within the program area.

4.5.2.5 Regional Habitat and Land Use in the Assessment Areas

This section describes the general biological conditions in and around the assessment areas, with particular emphasis on the wildlife habitats. Most of the discussion focuses specifically on the habitats adjacent to and within the program area, which is synonymous with the area slated for future program activities. The rationale for this approach is habitat conditions are particularly relevant to wildlife presence and use.

The assessment areas are located in the Southwestern California subregion (SW) of the California Floristic Province (i.e., a geographic area, made of six regions, defined by the continuity of its vegetational, topographic, geologic, and climatic features) of this subregion (Hickman 1993). Like other Mediterranean-type ecosystems, the California Floristic Province is distinguished more by the endemism of its plants than its animals. Of nearly 3,500 species of vascular plants in the hotspot, more than 2,120 (61 percent) are found nowhere else in the world. Around 52 plant genera are also endemic. The high levels of plant species endemism are due to its varied topography, climate zones, geology and soils.

Overall, the Study Areas are highly disturbed and fragmented because of historic man-made changes to the landscape, including urban, agricultural, industrial, railroad, and highways/road development. In a few areas, native vegetation and quality wildlife habitat remain relatively undisturbed. The majority of land in the Study Areas is an active urban area with mixed residential, commercial, and industrial use. Urban areas are the second greatest land use, including large cities such as Chino Hills, Chino, Montclair, Ontario, Upland, Rancho Cucamonga, Fontana, Rialto, Eastvale, Norco, and Jurupa Valley. In these areas native vegetation is absent or highly disturbed, and the more typical vegetation consists of a variety of planted landscape plants and other nonnative or ornamental vegetation.

4.5.2.6 General Wildlife Resources in the Project Area

The riparian forest in the Prado Basin is noted for its very high bird species diversity and abundance. Neotropical migrants depend on the deciduous trees and shrubs for foraging during migration. The mature trees provide numerous cavities for cavity-dependent wildlife and the tall trees are used by nesting raptors. The emergent vegetation rooted at the water's edge provides escape cover, shade and food for fish.

The wildlife resources in Prado Basin are important due, in part, to their high diversity and the large numbers of certain wetland species that occur there. The extensive and continuous riparian woodland, unique for southern California, supports several rare and declining species, particularly birds. A robust raptor population occurs within the project area. The raptors have a wealth of resources to draw on for foraging and nesting. They use the tall eucalyptus for nesting, roosting and perching. There are records of eleven raptor species breeding successfully in Prado Basin, including the white-tailed kite (*Elanus leucurus*), Cooper's hawk, golden eagle (Aquila chrysaetos), western screech-owl (*Otus asio*), and long-eared owl (*Asio otus*). A moderate number of raptor species from other regions winter in Prado Basin along with the resident raptors. Two of the rarer wintering raptor species include the peregrine falcon (*Falco peregrinus*) and merlin (*Falco columbarius*).

The double-crested cormorant (*Phalacrocorax auritus*), great blue heron (*Ardea herodias*), and blackcrowned night-heron (*Nycticorax nycticorax*) are conspicuous breeders among the larger water birds. The tree swallow (*Tachycinera bicolor*) is abundant locally, especially in the vicinity

of dead trees with cavities where it nests. The red-winged blackbird (*Agelaius phoeniceus*) and marsh wren (*Cistothorus palustris*) are locally abundant nesters, as is piedbilled grebe (*Podilymbus podiceps*), ruddy duck (*Oxyura jamaicensis*), and American coot (*Fulica americana*). The mallard (*Anas platyrhynchos*) and cinnamon teal (*Anas cyanoptera*) are more widely scattered. Shorebirds known to nest in the Basin include: the killdeer (*Charadrius voci/erus*), American avocet (*Recurvirostra americana*), black-necked stilt (*Himantopus mexicanus*), and spotted sandpiper (*Actitis macularia*). Marsh-nesting birds include: the American bittern (Botaurus lentiginosus), Virginia rail (*Rallus limicola*), common moorhen (*Gallinula chloropus*), common yellowthroat, song sparrow, and tricolored blackbird (*Agelaius tricolor*).

Species that nest in the eucalyptus groves include: the Anna's hummingbird (*Calypte anna*), northern flicker (*Colaples auratus*), Cassin's kingbird (*Tyrannus vociferans*), American crow, European starling, Bullock's oriole (*Icterus bullockii*), and house finch. Nests of the red-tailed hawk (*Buteo jamaicensis*) and red-shouldered hawk are regularly found in the eucalyptus trees as well, probably because they are often the tallest trees available. Oriole and kingbird nests are locally concentrated in eucalyptus trees. The commonly encountered winter visitors in the riparian forests are the ruby-crowned kinglet (*Regulus calendula*), white-crowned sparrow (*Zonotrichia leucophrys*), American pipit (*Anthus rubescens*) and savannah sparrow (*Passerculus sandwichensis*).

Winter concentrations of waterfowl in the Prado Basin are at least as large as those on any of the southern California coastal lagoons, and the Basin may hold the largest wintering populations of some species. The wintering waterfowl resources in the Basin are vast and are exploited by several waterfowl hunt club operators. Sixteen species of waterfowl have been found in the Basin, many numbering in the thousands. The most abundant are green-winged teal (*Anas clecca*), mallard, cinnamon teal, Northern shoveler (*Anas clypeata*), American wigeon (*Anas americana*), ring-necked duck (*Aythya collaris*), and ruddy duck. Twenty-three species of mammals including three non-native species have been observed in the Prado Basin. Six species of mammals found in the Basin are listed in the California Hunting Regulations with seasons and limits set by the State Fish and Game Commission.

The mule deer is a big game animal, the Audubon cottontail and black-tailed jackrabbit (*Lepus califomicus*) are resident small game animals, the gray fox (*Urocyon cinereoargenteus*) and raccoon are fur-bearing mammals, and the bobcat is a regulated non-game mammal.

There are seven amphibian species known to occur in the Prado Basin and surrounding areas (Glaser 1970, Robertson and Shipman 1974, and Zembal et al. 1985). The bullfrog (*Rana catesbeiana*), and African clawed frog (*Xenopus laevis*) are two invasive, non-native species commonly observed in the basin. There are 13 reptile species documented in the basin. The western fence lizard is the most frequently encountered reptile within the Basin. The side-blotched lizard is concentrated in upland areas. The western whiptail (*Cnemidophorus tigris*) is also found primarily in upland scrubland habitats around the perimeter of the Basin. The western skink (*Eumeces skiltonianus*) inhabits remnant scrublands. The gopher snake (*Piruophis melanoleucus*) is the snake most frequently observed in the Basin and is found in both uplands and in drier riparian habitats.

At least 15 species of fish have been found in the Prado Basin within the Santa Ana River. Most of these occur in the affected area, at least seasonally. Two, the Santa Ana sucker (SASU) and arroyo chub, are native to southern California; the rest are non-native introductions. According to Cam Swift, the most abundant species in the Basin are the flathead minnow and mosquitofish.

These two, along with the carp (*Cyprinus carpio*), comprise about 95 percent of all fish species in the Basin (Swift unpubl. data).

Common wildlife in the project area includes coyote (*Canis latrans*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), rattlesnake (Crotalus sp), western fence lizard (*Sceloporus occidentalis*), desert wood rat (*Neotoma lepida*), and deer mouse (*Peromyscus maniculatus*).

4.5.3 Regional Special Status Species and Habitats of Concern

Special status species are plants or animals that are legally protected under the federal ESA, the California ESA, or other regulations, as well as species considered sufficiently rare by the scientific community to qualify for such listing. Special-status species include the following:

- Species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR 17.12 [listed plants]); 50 CFR 17.11 (listed animals); and various notices in the *Federal Register* (proposed species).
- Species that are candidates for possible future listing as threatened or endangered under the federal ESA (76 Fed. Reg. 66370, October 26, 2011).
- Species listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 California Code of Regulations [C.C.R.] 670.5).
- Species that meet the definitions of "rare" or "endangered" under the California Environmental Quality Act (CEQA Guidelines Sections 15380 and 15125).
- Plants presumed by the California Native Plant Society (CNPS) to be “extinct in California” (Lists 1A, CNPS 2020).
- Plants considered by the CNPS to be “rare, threatened, or endangered in California” (Lists 1B and 2, CNPS 2020).
- Plants listed by CNPS as plants about which more information is needed to determine their status (List 3, CNPS 2020), and which may be included as special-status species on the basis of local significance or recent biological information.
- Plants listed by CNPS as plants of limited distribution or infrequent throughout a broader area in California (List 4, CNPS 2020); these plants are not “rare” from a statewide perspective but are uncommon enough that they are recommended for inclusion in environmental documents.
- Plant species listed as rare under the California Native Plant Protection Act (California Fish and Game Code 1900, et seq.).
- Animal species of special concern to the CDFW (CDFW 2019).
- Bird species of conservation concern as identified by USFWS in *Birds of Conservation Concern 2008* (USFWS 2008).
- Animals that are fully protected in California (California Fish and Game Code Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish]) (CDFW 2011).

The following table identifies the habitat types and land uses identified within the Study Areas of the proposed project.

Table 4.5-2
PROJECT AREA WILDLIFE HABITAT TYPES, LAND USES, AND TYPICAL VEGETATION

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Tree-Dominated Habitats	
Montane Hardwood (MHW)	Jeffrey pine, ponderosa pine, sugar pine, incense-cedar, California white fir, bigcone Douglas-fir, California black oak, and Coulter pine. At lower elevations, associates are white alder, coast live oak, bigleaf maple, California laurel, bigcone Douglas-fir, and occasionally valley oak, foothill pine, and blue oak (Cheatham and Haller 1975, McDonald and Littrell 1976).
Desert Riparian (DR)	Tamarisk, velvet ash, mesquite, screwbean mesquite, Fremont cottonwood, and willows such as Gooding, Hinds, and arroyo (Bradley and Deacon 1967, Cheatham and Haller 1975, Küchler 1977, Paysen et al. 1980, Parker and Matyas 1981). The subcanopy includes smaller individuals of the canopy species as well as quailbush, Mojave seablight, desert lavender, seep willow, and arrowweed (Bradley and Deacon 1967, Küchler 1977. Paysen et al. 1980, Parker and Matyas 1981).
Valley Foothill Riparian (VRI)	Cottonwood, California sycamore and valley oak. Subcanopy trees are white alder, boxelder and Oregon ash. Typical understory shrub layer plants include wild grape, wild rose, California blackberry, blue elderberry, poison oak, buttonbrush, and willows. The herbaceous layer consists of sedges, rushes, grasses, miner's lettuce, Douglas sagewort, poison-hemlock, and hoary nettle. (CDFW, 2020)
Shrub/Herbaceous-Dominated Habitats	
Riversidean Alluvial Fan Sage Scrub	Predominantly of drought-deciduous soft-leaved shrubs, but with significant cover of larger perennial species typically found in chaparral (Kirkpatrick and Hutchinson, 1977). Scalebroom (*Lepidospartum squamatum*) generally is regarded as an indicator of Riversidean alluvial scrub (Smith, 1980; Hanes, et al., 1989). In addition to scalebroom, alluvial scrub typically is composed of white sage (*Salvia apiana*), redberry (*Rhamnus crocea*), California buckwheat, Spanish bayonet, California croton (*Croton californicus*), cholla (*Opuntia spp*.), tarragon (*Artemisia dracunculus*), yerba santa (*Eriodictyon spp*.), mule fat, and mountain-mahogany (Hanes, et al., 1989; Smith, 1980). Annual species composition has not been studied but is probably similar to that found in understories of neighboring shrubland vegetation. Two sensitive annual species are endemic to alluvial scrub vegetation in the proposed Plan Area: slender-horned spineflower (*Dodecahema leptocerus*) and Santa Ana River woollystar (*Eriastrum densifolium ssp. sanctorum*). (Western Riverside County MSHCP, Chapter 3)
Mixed Chaparral (MCh)	Scrub oak, chaparral oak, and several species of ceanothus and manzanita. Individual sites may support pure stands of these shrubs or diverse mixtures of several species. Commonly associated shrubs include chamise, birchleaf mountain mahogany, silk-tassel, toyon, yerba-santa, California buckeye, poison-oak, sumac, California buckthorn, hollyleaf cherry, Montana chaparral-pea, and California fremontia. Some of these species may be locally dominant. Leather oak and interior silktassel are widely distributed on cismontane serpentine soils, and chamise and toyon may be abundant on these soils. Shrubs such as Jepson, coyote, and dwarf ceanothus and serpentine manzanita are local serpentine endemics (Cheatham and Haller 1975, Thorne 1976, Hanes 1977).

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Aquatic Habitats	
Coastal and Valley Freshwater Marsh	Located in Day Canyon wash area and Prado Basin; cattail and bulrush dominated wetlands. Also present is non-native invasive giant reed grass (Arundo), which also occur along the riparian habitat outside of marshland.
Riverine and riparian	Santa Ana River, Cucamonga Creek, Cajon Creek, Lytle Creek that are tributary to the Chino and Prado Basins; this riparian habitat is dominated by Fremont cottonwood, arroyo willow, black willow and western sycamore. Common shrubs include mulefat, California mugwort, poison oak and coyote bush.
Disturbed Habitats	
RS, RM, SD-RES	Residential
IC, IR	Community industrial and regional industrial
SD-COM, COM	Special development and commercial
FW	Floodway resource management zone
RL	Rural living
OS	Open Space
KC/SP	Kaiser Commerce Center Specific Plan
Non-vegetated Habitats	
Barren (BAR)	Unvegetated, rock, gravel, soil
Utilities ROW for water distribution	Cement-lined and herbaceous vegetation channels, pipes, culverts, pump stations, reservoirs.
HCP/Preserve Lands[2]	
Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) June 22, 2004	The MSHCP encompasses 1.26 million acres of land in unincorporated Riverside County west of the San Jacinto Mountains and creates conservation land for 153,000 acres of land. Focal species covered include least Bell's vireo, southwestern willow flycatcher, western yellow-billed cuckoo, Quino checkerspot butterfly, and fairy shrimp. Riparian, riverine, sage scrub and other upland vegetative communities are protected.
Designated Critical Habitat within Proximity to Proposed Project	
Spreading navarretia	19 miles southeast of the Study Area
Arroyo toad	6 miles northeast of Study Area and 9 miles south of the Study Area
Yellow-billed cuckoo	Directly overlapping with all MZ's in the south of the Study Area
Southern mountain yellow-legged frog	3 miles north of the Study Area
Thread-leaved brodiaea	7 miles northwest and 19 miles southeast of the Study Area
San Bernardino Merriam's kangaroo rat	Directly overlapping with MZ-2 in the north and within 1 mile northeast to 20 miles southeast of the Study Area
Least Bell's vireo	Directly overlapping all MZ's in the southern portion of the Study Area
Coastal California gnatcatcher	Directly overlapping the eastern portion of MZ-3 and within 1 mile of all MZ's within the Study Area
Southwestern willow flycatcher	Directly overlapping pockets in the southern portions of MZ-1, 2, 3, and 5 and within 1 mile of all MZ's in the Study Area
Santa Ana sucker	Directly overlapping the full southern extent of MZ-5 and within 2 miles of remaining MZ's
Braunton's milk-vetch	3 miles southwest of the 5 MZ's

[2] The Upper Santa Ana River Habitat Conservation Plan is in Draft Form, and has not yet been considered and adopted by the United States Fish and Wildlife Service (USFWS). Thus, it is not yet in effect.

Wildlife Habitat Type/ Land Use Type	Typical Vegetation
Conservation Banks	
Cajon Creek Habitat Conservation Management Area Contact: Sheri Ortega Property Manager Vulcan Materials Company, Western Division 500 N. Brand Blvd. Suite 500 Glendale, CA 91203 (Division Office) 16013 Foothill Blvd., Irwindale, CA 91702 (626) 633-4236 (Office) (323) 637-2569 (Mobile) ortegas@vmcmail.com	24 T&E species and their associated habitats are covered, including: Riversidian alluvial fan sage scrub; San Bernardino kangaroo rat; Santa Ana woolly star; Slender-horned spineflower. Credits: Riversidian alluvial fan sage scrub
Soquel Canyon Mitigation Bank Contact: Mitigation Bank Manager (877) 445-8699 bankmanager@landveritas.com	Ephemeral; Intermittent and Permanent stream/riparian; Coastal sage scrub; Chaparral; Native grassland; Walnut woodland; Oak woodland; Mulefat scrub
Chiquita Canyon Conservation Bank **Contact:** Foothill / Eastern Transportation Corridor Agency 201 E. Sandpointe, Ste 200 P.O. Box 28870 Santa Ana, CA 92799-8870 Attn: William Woollett, Jr. Chief Executive Officer	Coastal sage scrub; Riversidian sage scrub; California gnatcatcher
Black Mountain Conservation Bank Contact: WildDesert EM Holdings, LLC 3301 Industrial Avenue Rocklin, CA 95765 (916) 435-3555 Fax: (916) 435-3556	Desert tortoise; Mohave ground squirrel; American badger; Desert kit fox; Loggerhead shrike; LeConte's thrasher; stream

4.5.3.1 Upper Santa Ana River Habitat Conservation Plan

Over the past several years the San Bernardino Valley Municipal Water District (Valley District) organized a number of water agencies in the Upper Santa Ana River Watershed to develop a habitat conservation plan for most of the special status species located with the Watershed. In May 2021 Valley District released both the Upper Santa Ana River Habitat Conservation Plan (HCP) and the Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report for public review and comment. IEUA has been a participant in the HCP development process and is one of a number of Permittee Agencies that will receive Incidental Take Permit (ITP) coverage for specific activities identified in the HCP as “Covered Activities.” The two documents published in May are:

- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan Draft Environmental Impact Report,* May 2021

- San Bernardino Valley Municipal Water District, *Upper Santa Ana River Habitat Conservation Plan,* May 2021

Both documents were prepared by ICF (San Diego) and they are hereby incorporated by reference into this document as permitted by Section 15150 of the State CEQA Guidelines. Copies of these two documents are available for review upon request at the Inland Empire Utilities Agency located at 6075 Kimball Avenue, Chino, CA 91708.

Of importance to this Program EIR, the biology data base and biology evaluation in the HCP DEIR represent the most comprehensive review of 22 of the most sensitive species in the Upper SAR Watershed, which includes the Chino Basin. The following summary information is abstracted from the Executive Summary of the SAR HCP DEIR.

The Upper SAR HCP has been collaboratively prepared by Valley District and other Permittees to meet the requirements of Section 10 of the FESA and USFWS's HCP Handbook for a specified planning area, generally within San Bernardino and Riverside Counties (see Figure ES-2 (provided herein as ***Figure 4.5-2****) and Section ES.4, HCP Planning Area and Permit Area). The HCP provides many valuable benefits to the region by providing a mechanism and approach to collaboratively address endangered species issues on a regional scale and with long-term funding assurances. The conservation approach is designed to anticipate, prevent, and resolve potential conflicts over current and future resource needs through the HCP planning and implementation process. This includes development of strategies to meet minimum in-stream flow requirements to protect native aquatic species and riparian communities in the Santa Ana River, creative solutions to be implemented for tributary habitat restoration/ rehabilitation and long-term protection, conservation and management of the natural resources and species of the Upper Santa Ana River watershed. These actions, as detailed in Chapter 5, Conservation Strategy, of the Upper SAR HCP and summarized in Chapter 2, Project Description, are intended to be implemented to benefit and reduce incidental take of Covered Species in a way that ensures long-term ecological value to the region. This regional conservation approach is intended to help avoid project-by-project incidental take approval for the specified Covered Activities, which can be costly and time consuming for applicants and often results in uncoordinated and biologically ineffective mitigation.*

The Upper Santa Ana River is home to dozens of water districts, flood control districts, and other, local water management agencies with an interest in the sound management of water supply resources (storage, conveyance, treatment, flood protection, and recreation) and sustainable stewardship (water quality and biological resource protection) of the watershed. Many of these entities have participated in integrated regional watershed management coordination efforts in the Upper Santa Ana River since the 1960s. Recent cooperative planning initiatives among the water districts and stakeholders have resulted in a comprehensive vision for sustainable stewardship and watershed management (e.g., One Water, One Watershed 2.0 Plan finalized in 2014). However, several considerable challenges remain in the Upper Santa Ana River watershed, including ongoing modification of the Santa Ana River hydrogeomorphology, reduction of river flow, alteration of natural habitats, and the long-term effects of these changes on the functional ecology and native species of the watershed. These ongoing watershed effects are the result of continuing population growth, increased water demand, reductions in imported water supplies, and effects of climate change.

The Upper SAR HCP was initiated to help resolve some of these watershed challenges that need to be coordinated with regional water and other infrastructure projects. Because of the

tremendous public value associated with improving regional water supply reliability and flood protection, the Permittees are proposing long-term commitments to native biological resources by agreeing to conserve, monitor, and manage Covered Species and their habitats for the next 50 years. In exchange, the Permittees would receive assurances that USFWS would not require additional land, water, or other natural resources mitigation beyond the level agreed upon in the HCP as long as the Permittees are honoring the terms and conditions of the permit.

A key to developing a regional conservation approach has been a highly collaborative and transparent process involving Federal, State, and local agencies and stakeholder groups. The Santa Ana HCP Team includes the Permittees (the Permittee Agencies and SCE); Federal, State, and local agencies; and interested members of the public. During the planning process, the team met on a regular basis and were kept up to date via the HCP website (http://www.uppersarhcp.com/). The foundation of the HCP was developed by the Biological Technical Advisory Committee and the Hydrologic Technical Advisory Committee. The Biological Technical Advisory Committee helped to identify the Covered Species; provided conceptual species model input; and identified threats, natural drivers, and conservation targets for the Covered Species that helped develop biological goals and objectives. The Hydrologic Technical Advisory Committee provided input for the hydrological modeling conducted for the Upper Santa Ana River and its tributary system. A hydraulic model was used to estimate the effects on aquatic habitats in terms of low-flow habitat suitability and high-flow sediment transport. This modeling created the foundation for quantifying existing hydrologic conditions and future conditions with implementation of the Covered Activities on the Upper Santa Ana River and its tributaries.

Implementing the Upper SAR HCP will be accomplished through the Upper Santa Ana River Sustainable Resources Alliance (Alliance). The Alliance will be responsible for implementing the conservation strategy, directing regulatory compliance, and conserving water and species habitat to facilitate timely approval and reliability of water supply projects. The ultimate goal of the Alliance is to maintain a sustainable watershed for water resources and species resources, of which the Upper SAR HCP is a substantial part. The Upper SAR HCP and other watershed sustainability components overseen by the Alliance will bring together a variety of organizations, agencies, and the public to create a forum for collaborative problem-solving to meet diverse needs and missions that include the protection of endangered species and timely approval and reliability of water supply projects.

*The HCP Planning Area is in San Bernardino and Riverside Counties, California, and encompasses approximately 862,966 acres (see **Figure 4.5-2**). The Planning Area is based on sub-watershed boundaries within the Santa Ana River watershed, except in areas where the water resource agency boundaries extend beyond the Santa Ana River watershed or where the Planning Area is mostly constrained by the Los Angeles County and Orange County lines. The Santa Ana River watershed below Prado Dam is not included in the Planning Area because conservation activities and the Covered Activities under the HCP are not planned therein.*

The area covered by the proposed ITPs, which falls within but does not include the entire Planning Area, is referred to as the Permit Area. The Upper SAR HCP Permit Area is the geographic area where the impacts of the Covered Activities are expected to occur and is depicted as the ownership, easements, and areas of operation and maintenance (O&M) where all Covered Activities are located within natural habitats. The Permit Area also includes the HCP Preserve System so that the ITPs cover the potential take associated with habitat mitigation, management, and monitoring. While a number of mitigation areas are already known (e.g., tributary restoration/rehabilitation sites), others will be identified during HCP implementation. If the HCP

*Preserve System is expanded in the future, the Permit Area will also include any new areas of the HCP Preserve System. Figure ES-3 (provided herein as **Figure 4.5-3**) depicts the Permit Area based on mapping of the Covered Activities and the currently proposed HCP Preserve System.*

CEQA requires an EIR to contain a statement of the objectives of the project, including the underlying purpose of the project (State CEQA Guidelines §15124 (b)). The goal, or underlying purpose, of the proposed HCP Project is to streamline permitting for Covered Activities by protecting, and restoring the habitats needed for Covered Species to offset the effects of water supply management activities in the HCP Planning Area. To meet this goal, the Upper SAR HCP includes a Conservation Strategy that will conserve and protect the long-term ecological health and resilience of Covered Species and other non-listed native species within the HCP Preserve System.

In addition to this overarching goal, the Proposed Project would achieve the following, specific project objectives.

- *Provide Federal ITPs that facilitate the ability of the Permittee Agencies to construct new facilities and/or operate and maintain facilities associated with their mission.*
- *Establish the HCP Preserve System.*
- *Maintain, enhance, or establish metapopulations of Covered Species within the HCP Preserve System.*
- *Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.*
- *Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.*
- *Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.*

To achieve these objectives, the Upper SAR HCP describes avoidance and/or minimization of impacts, mitigation measures to ensure habitat conservation strategies, compatible joint uses of lands, and land use restrictions.

The following HCP objectives will support the HCP goals:

- *Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.*
- *Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.*
- *Maintain and successfully enhance existing and new Santa Ana sucker habitats.*
- *Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.*
- *Implement successful conservation measures to promote the recovery of Covered Species.*
- *Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.*

The Upper SAR HCP is a regional, comprehensive program that would provide a framework to protect, enhance, and restore the habitat for specifically identified plant and animal species (Covered Species), while streamlining permitting for Covered Activities. The term Proposed Project, as used in this EIR, for CEQA purposes, is defined as the adoption and implementation of the Upper SAR HCP and associated ITPs for Permittees. Therefore, the Proposed Project

evaluated in this EIR is focused on the potential direct and indirect impacts that could result from the implementation of conservation actions and the issuance of ITPs for Covered Activities.

For biological resources and hydrology, the Proposed Project impacts address the net effect of implementing the conservation actions in context with the Covered Species habitat impacts. The Proposed Project is specifically designed to offset (minimize and mitigate) Covered Activity habitat and streamflow impacts on Covered Species.

The analyses presented in this DEIR are focused on the direct and indirect impacts that may result from implementing the Proposed Project, which include the following major elements:

- *Issuance of permits for the incidental take of 20 of the 22 Covered Species.*
- *Conservation and restoration activities within an HCP Preserve System to be established and managed for Covered Species habitat.*
- *Additional actions to improve aquatic, riparian, and alluvial scrub habitats, as well as additional sensitive habitats throughout the Upper Santa Ana River watershed (i.e., not necessarily within the HCP Preserve System).*
- *Species-specific conservation measures that also include the re-establishment of native fish species, through processes of captive headstarting and translocation, to create additional resilience to extinction by establishing redundant populations in the Upper Santa Ana River watershed mountain tributary streams.*
- *Upper SAR HCP Preserve System management and monitoring, including habitat improvement, the control of nonnative species (flora and fauna), Covered Species captive headstarting and translocation activities, species surveys and research, additional vegetation management to reduce fire potential, site cleanup, preserve patrols, and others.*

Biological goals are broad, guiding principles based on the conservation needs of the Covered Species. The following biological goals will be accomplished within the HCP Preserve System.

- **Goal 1:** Conserve Covered Species and manage their habitats to contribute to the recovery of listed species or those that may become listed under the FESA.
- **Goal 2**: Maintain or simulate natural ecological processes necessary to maintain the functionality of the natural communities and habitats upon which the Covered Species depend within the HCP Preserve System and to the greatest extent possible outside the HCP Preserve System.
- **Goal 3:** Maintain or increase habitat connectivity in the HCP Preserve System and to adjacent protected habitat areas to reduce isolation between metapopulations of Covered Species.
- **Goal 4:** Actively manage lands within the HCP Preserve System for the benefit of Covered Species to maintain or increase the health of populations.

The following biological objectives will support the HCP goals:

- **Objective 1:** Conserve, restore, re-establish, and manage a minimum of 1,348.8 acres of native habitat for Covered Species in the HCP Preserve System over the duration of the life of the permit.
- **Objective 2**: Reduce anthropogenic and environmental threats to Covered Species and their habitats within the HCP Preserve System.
- **Objective 3**: Maintain and successfully enhance existing and new Santa Ana sucker habitats.
- **Objective 4:** Maintain and successfully enhance existing San Bernardino kangaroo rat habitats.

- **Objective 5:** Implement successful conservation measures to promote the recovery of Covered Species.
- **Objective 6**: Conduct scientific research in order to improve our knowledge and fill existing and future data gaps.

Species-specific objectives and species-specific conservation actions are presented for each Covered Species in Section 5.9, Species-Specific Conservation Strategies, of the Upper SAR HCP to achieve the HCP-level goals and objectives.

The Lytle Creek Conservation Bank and Cajon Creek Conservation Bank are in the alluvial floodplain and active channel of Lytle Creek and Cajon Creek, respectively, near the confluence of Lytle and Cajon Creeks (north of Interstate 210 and west of Interstate 215). Both banks have habitat conservation values available to mitigate impacts on SBKR and Santa Ana River woolly-star.

Mitigation to offset impacts on Covered Species (and their habitat) from Covered Activities within Alluvial Fan Preserve Unit B will be satisfied by land acquisition, habitat uplift (restoration or rehabilitation), and management of lands within this same Preserve Unit. Mitigation lands are actively being pursued for acquisition into the HCP Preserve System; however, if additional mitigation is needed above and beyond these actions, then conservation/mitigation credits in the Lytle Creek or Cajon Creek Conservation Banks may be used.

The Upper SAR HCP includes specific habitat conservation, improvement, management, monitoring, avoidance and minimization measures (AMMs), and other actions for each Covered Species. The species-specific conservation strategies are the heart of the HCP Conservation Strategy. Each species-specific conservation strategy is described in terms of the conservation objectives and conservation actions developed specifically for that species. The strategy describes the species- specific AMMs to be implemented in addition to the general AMMs for the Upper SAR HCP. Specific instream flow management measures are included to benefit Santa Ana sucker and arroyo chub.

Captive headstarting and translocation of Santa Ana sucker is also planned for higher elevation streams to create additional resilience by establishing redundant populations in upper watershed tributaries. Streams considered for translocation sites include the Santa Ana River upstream of Seven Oaks Dam, and City, Plunge, Hemlock, Mill, Bear, and Lytle Creeks. San Antonio Creek may also be considered for translocation. Translocation activities for mountain yellow-legged frog is also being supported by the Upper SAR HCP Conservation Strategy.

The Delhi Sands flower-loving fly and arroyo toad are included in the Upper SAR HCP because they are species that overlap with known or modeled habitat areas; however, all impacts will be avoided by implementing both the general measures to avoid adverse impacts described in the Upper SAR HCP and the species-specific measures. The measures will be employed to avoid all impacts on the Delhi Sands flower-loving fly and arroyo toad by implementation of Covered Activities, and the Upper SAR HCP does not provide incidental take coverage for either species. If the proposed activity does not have the potential to directly or indirectly result in adverse effects on these two species, including temporary or permanent impacts on their habitat, no additional mitigation or AMMs would be required for this species.

4.5.3.2 Special Status Plant and Animal Species Potentially Occurring Within the CBP Project Area

The SAR HCP addresses both Federally and State-listed threatened and endangered species, as listed in Table ES-1 (**Table 4.5-3** in this document). Although the primary intent of the SAR HCP is to provide mitigation for effects on Covered Species, it would also contribute to the overall protection of native biological diversity, habitat for native species, natural communities, and local ecosystems. This broad scope would conserve a wide range of natural resources, including native species that are common and those that are rare.

As listed in Table ES-1 (**Table 4.5-3** in this document) 20 species are covered by the SAR HCP, 9 listed and 11 non-listed species, and there are 2 additional fully avoided species that are listed but that will be fully avoided by impacts from Covered Activities. The incidental take authorization under Section 10 of the FESA will apply to the wildlife species. Impacts on listed plant species are not prohibited under the FESA or authorized under a Section 10(a)(1)(B) permit. However, the two plant species conserved by the SAR HCP are listed in the 10(a)(1)(B) permit in recognition of the conservation measures and benefits provided for them under the Upper SAR HCP such that the Permittees will receive assurances pursuant to the USFWS "No Surprises" Rule. Similarly, the unlisted Covered Species will also receive assurances under the "No Surprises" rule should they become listed in the future. In addition to Covered Species for which incidental take authorization is requested, two species are fully avoided species: Delhi Sands flower-loving fly and arroyo toad. The AMMs included in Chapter 5, Conservation Strategy, of the Upper SAR HCP are expected to reduce any adverse effects on these species so that any adverse effects from Covered Activities would not rise to the level of take.

State authorization for incidental take of other wildlife species that may be State-listed in the future may be sought through the amendment process and in accordance with the applicable provisions of the California Fish and Game Code. Although CDFW will not approve the Upper SAR HCP, its conservation strategies are intended to satisfy the requirements of the CESA and support the issuance of the ITP(s). Species for which incidental take authorization will be requested under the CESA are indicated as State-listed species in Table ES-1 (**Table 4.5-3** in this document).

For the purposes of this Draft PEIR, the plant and animal species listed in **Table 4.5-3** will be a primary focus of this biological resource section. First, this is because this species list reflects several years of development by the Permittees with input from the CDFW and USFWS. Second, this approach is not intended to supplant the standard process of identifying sensitive species for each specific CBP Infrastructure facility site in the future. As CBP Infrastructure site locations are identified and evaluated in the future, the concurrent biology surveys will compile the standard list of sensitive species from the California Natural Diversity Data Base (CNDDB) and the USFWS's Information for Planning and Consultation (IPaC) data bases. No sensitive species will be overlooked and IEUA is committed to conducting comprehensive site biology surveys during the appropriate season(s).

However, the goal is to focus on those species of concern that have already been identified within the Upper SAR watershed through the extensive effort of the Permittees and the regulatory agencies. By narrowing the number of species of most concern (i.e., species of special concern) within the CBP project area, IEUA and its partners can further contribute to managing the essential supporting habitats over the long term. In the HCP document, detailed descriptions of these 22 species are provided in Section 3.8.3 Covered species Accounts), from page 3-40 to 3-106. These data, including maps of species historic occupancy, are provided for review in Appendix 6

of Volume 2 of this Draft PEIR. From the standpoint of the proposed CBP, the most pertinent finding is that very few of these covered species occur within the locations where the vast majority of CBP facilities are proposed to occur.

Table 4.5-3
COVERED SPECIES

Common Name	Scientific Name	Status	
		Federal	State
Covered Species			
Slender-horned spineflower	*Dodecahema leptoceras*	Endangered	Endangered
Santa Ana River woolly-star	*Eriastrum densifolium* ssp. *sanctorum*	Endangered	Endangered
Santa Ana sucker	*Catostomus santaanae*	Threatened	None
Arroyo chub	*Gila orcuttii*	None	SSC
Santa Ana speckled dace	*Rhinichthys osculus* ssp.	None	SSC
Mountain yellow-legged frog (Southern California DPS)	*Rana muscosa*	Endangered	Endangered
Western spadefoot	*Spea hammondii*	None	SSC
California glossy snake	*Arizona elegans occidentalis*	None	SSC
South coast garter snake	*Thamnophis sirtalis* sp.	None	SSC
Western pond turtle	*Emys pallida*	None	SSC
Tricolored blackbird	*Agelaius tricolor*	None	Threatened
Burrowing owl	*Athene cunicularia*	None	SSC
Cactus wren	*Campylorhynchus brunneicapillus*	None	SSC
Yellow-breasted chat	*Icteria virens*	None	SSC
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	Threatened	Endangered
Southwestern willow flycatcher	*Empidonax traillii extimus*	Endangered	Endangered
Coastal California gnatcatcher	*Polioptila californica*	Threatened	SSC
Least Bell's vireo	*Vireo bellii pusillus*	Endangered	Endangered
Los Angeles pocket mouse	*Perognathus longimembris brevinasus*	None	SSC
San Bernardino kangaroo rat	*Dipodomys merriami parvus*	Endangered	Candidate
Fully Avoided Species[a]			
Delhi Sands flower-loving fly	*Rhaphiomidas terminatus abdominalis*	Endangered	None
Arroyo toad	*Anaxyrus californicus*	Endangered	None

[a]Implementation of avoidance measures as described in Chapter 5, *Conservation Strategy,* of the Upper SAR HCP would prevent the take of these species.
DPS = Distinct Population Segment; SSC = California Department of Fish and Wildlife Species of Special Concern

When **Figure 1** (CBP Infrastructure in Chapter 3) is compared to **Figure 4.5-3** and **Figure 4.5-4**, it is clear that almost all of the of the CBP infrastructure occurs within the Urban and Built-Up Land/Developed area of the Chino Basin. The individual species maps from the **HCP Figures 3-26 through 3-61** substantiate this finding. Although covered species, such as burrowing owl,

arroyo toad and/or San Bernardino kangaroo rat, may be encountered on a limited case-by-case basis by CBP Infrastructure projects, installation of the required CBP Infrastructure appears to have a limited potential to directly impact special status or sensitive covered species.

4.5.4 Regulatory Setting

The proposed CBP would be required to comply with the following federal and state regulations and laws:

1. NEPA and CEQA guidelines that apply to sensitive biological resources
2. U.S. Army Corps of Engineers (COE) Clean Water Act Section 404 Permit and
3. U.S. Environmental Protection Agency (EPA) 404 (b)1 Alternatives Analysis
4. Section 7 and/or 10 of U.S. Endangered Species Act of 1973, as amended
5. U.S. Migratory Bird Treaty Act
6. U.S. Bald Eagle Act
7. California Endangered Species Act
8. California Department of Fish and Game (CDFG) Streambed Alteration Agreement
9. (Section 1600 of the Fish and Game Code)
10. State of California Native Plant Protection Act
11. Plant Protection and Management Ordinances (County Code Title 8, Div. 11)

4.5.4.1 Federal

Federal Endangered Species Act

The federal Endangered Species Act (ESA) (1973) protects plants and wildlife that are listed by the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) as endangered or threatened. Section 9 of the ESA prohibits the taking of endangered wildlife, where "taking" is defined as any effort to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct" (50 CFR 17.3). For plants, this statute governs removing, possessing, maliciously damaging, or destroying any endangered plant on federal land and removing, cutting, digging up, damaging, or destroying any endangered plant on non-federal land in knowing violation of state law (16 United States Code [USC] 1538). Under Section 7 of the ESA, federal agencies are required to consult with the USFWS if their actions, including permit approvals or funding, could adversely affect an endangered species (including plants) or its critical habitat. Through consultation and the issuance of a biological opinion, the USFWS may issue an incidental take statement allowing take of the species that is incidental to an otherwise authorized activity, provided the action will not jeopardize the continued existence of the species. The ESA specifies that the USFWS designate habitat for a species at the time of its listing in which are found the physical or biological features "essential to the conservation of the species," or which may require "special Management consideration or protection..." (16 USC § 1533[a][3].2; 16 USC § 1532[a]). This designated Critical Habitat is then afforded the same protection under the ESA as individuals of the species itself, requiring issuance of an Incidental Take Permit prior to any activity that results in "the destruction or adverse modification of habitat .... determined .... to be critical" (16 USC § 1536[a][2]).

Interagency Consultation and Biological Assessments

Section 7 of the ESA provides a means for authorizing the "take" of threatened or endangered species by federal agencies, and applies to actions that are conducted, permitted, or funded by a federal agency. The statute requires federal agencies to consult with the USFWS or NMFS, as appropriate, to ensure that actions they authorize, fund, or carry out are not likely

to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. If a proposed project "may affect" a listed species or destroy or modify critical habitat, the lead agency is required to prepare a biological assessment evaluating the nature and severity of the potential effect.

Habitat Conservation Plans
Section 10 of the ESA requires the acquisition of an Incidental Take Permit (ITP) from the USFWS by non-federal landowners for activities that might incidentally harm (or "take") endangered or threatened wildlife on their land. To obtain a permit, an applicant must develop a Habitat Conservation Plan that is designed to offset any harmful impacts the proposed activity might have on the species. The Habitat Conservation Plan (HCP) developed by the San Bernardino Valley Municipal Water District (Valley District) for the Upper Santa Ana River Watershed (SAR) falls under this heading and IEUA's participation in the SAR HCP is further discussed in this document.

The Migratory Bird Treaty Act of 1918
The Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. 703-711) makes it unlawful to possess, buy, sell, purchase, barter or "take" any migratory bird listed in Title 50 of the Code of Federal Regulations CFR Part 10. "Take" is defined as possession or destruction of migratory birds, their nests or eggs. Disturbances that cause nest abandonment and/or loss of reproductive effort or the loss of habitats upon which these birds depend may be a violation of the MTBA.

Clean Water Act Section 404
Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the USACE which generally defines wetlands through consideration of three criteria: hydrology, soils, and vegetation. Under Section 404 of the Clean Water Act (CWA), the USACE is responsible for regulating the discharge of dredged or fill material into waters of the United States. The term "waters" includes wetlands and non-wetland bodies of water that meet specific criteria as defined in the CFR.

The USACE and U.S. Environmental Protection Agency (USEPA) issued a set of guidance documents detailing the process for determining CWA jurisdiction following the U.S. Supreme Court's decision in *Rapanos v. United States* and *Carabell v. United States* (herein referred to simply as "Rapanos"). The USEPA and USACE issued a summary memorandum of the guidance for implementing the Supreme Court's decision in Rapanos that addresses the jurisdiction over waters of the United States under the Clean Water Act. The complete set of guidance documents were used to collect relevant data for evaluation by the USEPA and the USACE to determine CWA jurisdiction over a project site and to complete the "significant nexus test" as detailed in the guidelines and the USACE-approved Jurisdictional Determination Form.

Rivers and Harbors Act 1899
Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for the construction of any structure in or over any navigable waters of the U.S.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 U.S.C. Sections 661 to 667e et seq.) applies to any federal project where any body of water is impounded, diverted, deepened, or otherwise modified. Project proponents are required to consult with the USFWS and the appropriate state wildlife agency.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. Section 1801 et seq.) requires all federal agencies to consult with the NMFS on all actions or proposed actions (permitted, funded, or undertaken by the agency) that may adversely affect fish habitats. It also requires cooperation among NMFS, the councils, fishing participants, and federal and state agencies to protect, conserve, and enhance essential fish habitat, which is defined as those waters and substrates needed by fish for spawning, breeding, feeding, and growth to maturity.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (The Eagle Act) (1940), amended in 1962, was originally implemented for the protection of bald eagles (Haliaeetus leucocephalus). In 1962, Congress amended the Eagle Act to cover golden eagles (Aquila chrysaetos), a move that was partially an attempt to strengthen protection of bald eagles, since the latter were often killed by people mistaking them for golden eagles. This act makes it illegal to import, export, take (molest or disturb), sell, purchase, or barter any bald eagle or golden eagle or part thereof. The golden eagle, however, is accorded somewhat lighter protection under the Eagle Act than that of the bald eagle.

Executive Orders (EO)

Invasive Species—Executive Order 13112 (1999)

Issued on February 3, 1999, promotes the prevention and introduction of invasive species and provides for their control and minimizes the economic, ecological, and human health impacts that invasive species cause through the creation of the Invasive Species Council and Invasive Species Management Plan.

Protection of Wetlands—Executive Order 11990 (1977)

Issued on May 24, 1977, helps avoid the long-term and short-term adverse impacts associated with destroying or modifying wetlands and avoiding direct or indirect support of new construction in wetlands when there is a practicable alternative.

Migratory Bird—EO 13186 (2001)

Issued on January 10, 2001, promotes the conservation of migratory birds and their habitats and directs federal agencies to implement the Migratory Bird Treaty Act. Protection and Enhancement of Environmental Quality—EO 11514 (1970a), issued on March 5, 1970, supports the purpose and policies of the National Environmental Policy Act (NEPA) and directs federal agencies to take measures to meet national environmental goals.

Migratory Bird Treaty Reform Act

The Migratory Bird Treaty Reform Act (Division E, Title I, Section 143 of the Consolidated Appropriations Act, 2005, PL 108–447) amends the Migratory Bird Treaty Act (16 U.S.C. Sections 703 to 712) such that nonnative birds or birds that have been introduced by humans to the United States or its territories are excluded from protection under the Act. It defines a native migratory bird as a species present in the United States and its territories as a result of

natural biological or ecological processes. This list excluded two additional species commonly observed in the United States, the rock pigeon (Columba livia) and domestic goose (Anser domesticus).

4.5.4.2 State

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the main provisions of the federal ESA and is administered by the California Department of Fish and Wildlife (CDFW). Unlike its federal counterpart, The CESA applies the take prohibitions to not only listed threatened and endangered species, but also to state candidate species for listing. Section 86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The CDFW maintains lists for Candidate-Endangered Species and Candidate-Threatened Species, which have the same protection as listed species. Under the CESA, the term "endangered species" is defined as a species of plant, fish, or wildlife, which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California.

Clean Water Act Section 401/Porter-Cologne Act

The State of California regulates water quality related to discharge of dredge or fill material into waters of the State pursuant to Section 401 of the CWA. Section 401 compliance is a federal mandate regulated by the State. The local Regional Water Quality Control Boards (RWQCB) have jurisdiction over all those areas defined as jurisdictional under Section 404 of the CWA. In addition, the RWQCBs regulate water quality for all waters of the State, which may also include isolated wetlands, as defined by the California Porter-Cologne Water Quality Control Act (Porter Cologne; Ca. Water Code, Div. 7, Section 13000 et seq.). The RWQCB regulates discharges that can affect water quality of both waters of the U.S. and waters of the State. If there is no significant nexus to a traditional navigable water body and thus no USACE jurisdiction over waters of the U.S., then the RWQCB regulates water quality of waters of the State through a Waste Discharge Permit, as required to comply with the Porter-Cologne Water Quality Control Act when a Section 401 water quality certification would not apply.

Sections 1600 through 1606 of the California Fish and Game Code (CFGC)

These sections require that a Streambed Alteration Application be submitted to the CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." The CDFW reviews the proposed actions and, if necessary, submits to the applicant a proposal for measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by the Department and the applicant is the Streambed Alteration Agreement. Often, projects that require a Streambed Alteration Agreement also require a permit from the USACE under Section 404 of the CWA. In these instances, the conditions of the Section 404 permit and the Streambed Alteration Agreement may overlap.

California Fish and Game Codes (CFGC)

All birds, and raptors specifically, and their nests, eggs and parts thereof are protected under Sections 3503.5 of the CFGC. Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) is considered a violation of this code. Additionally, Section 3513 of the CFGC prohibits the take or possession of any migratory non-game bird listed by the MBTA. The CDFW has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically

sustainable populations (CFGC Section 1802). The CDFW, as a trustee agency under CEQA Guidelines Section 15386, provides expertise in reviewing and commenting on environmental documents and makes and regulates protocols regarding potential negative impacts to biological resources held in California.

Fully Protected Species

Four sections of the CFGC list 37 fully protected species (CFGC Sections 3511, 4700, 5050, and 5515). These sections prohibit take or possession "at any time" of the species listed, with few exceptions, and state that "no provision of this code or any other law will be construed to authorize the issuance of permits or licenses to 'take' the species," and that no previously issued permits or licenses for take of the species "shall have any force or effect" for authorizing take or possession.

Bird Nesting Protections

Bird nesting protections (CFGC Sections 3503, 3503.5, 3511, and 3513) include the following:

- Section 3503 prohibits the take, possession, or needless destruction of the nest or eggs of any bird.
- Section 3503.5 prohibits the take, possession, or needless destruction of any nests, eggs, or birds in the orders Falconiformes (new world vultures, hawks, eagles, ospreys, and falcons, among others), or Strigiformes (owls).
- Section 3511 prohibits the take or possession of fully protected birds.
- Section 3513 prohibits the take or possession of any migratory nongame bird or part thereof, as designated in the MBTA. To avoid violation of the take provisions, it is generally required that project-related disturbance at active nesting territories be reduced or eliminated during the nesting cycle.

CA Migratory Bird Act-Assembly Bill 454

Existing federal law, the Migratory Bird Treaty Act, provides for the protection of migratory birds, as specified. The federal act also authorizes states and territories of the United States to make and enforce laws or regulations that give further protection to migratory birds, their nests, and eggs. Existing state law makes unlawful the taking or possession of any migratory nongame bird, or part of any migratory nongame bird, as designated in the federal act, except as provided by rules and regulations adopted by the United States Secretary of the Interior under provisions of the federal act……. (a) It is unlawful to take or possess any migratory nongame bird as designated in the federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703 et seq.), or any part of a migratory nongame bird described in this section, except as provided by rules and regulations adopted by the United States Secretary of the Interior under that federal act.

Native Plant Protection Act

The Native Plant Protect Act (NPPA) (1977) (CFGC Sections 1900-1913) was created with the intent to "preserve, protect, and enhance rare and endangered plants in this State." The NPPA is administered by CDFW. The California Fish and Game Commission has the authority to designate native plants as endangered or rare and to protect endangered and rare plants from take. The CESA (CFGC 2050-2116) provides further protection for rare and endangered plant species, but the NPPA remains part of the Fish and Game Code.

Natural Communities Conservation Planning Act

This act was enacted to encourage broad-based planning to provide for effective protection and conservation of the state's wildlife resources while continuing to allow appropriate development and growth (CFGC Sections 2800 to 2835). Natural Community Conservation Plans (NCCP) may

be implemented, which identify measures necessary to conserve and manage natural biological diversity within the planning area, while allowing compatible and appropriate economic development, growth, and other human uses.

Senate Concurrent Resolution No. 17 – Oak Woodlands
State Senate Concurrent Resolution No. 17 is legislation that requests state agencies having land use planning duties and responsibilities to assess and determine the effects of their decisions or actions within any oak woodlands containing Blue, Engelmann, Valley, or Coast Live Oak. The measure requests those state agencies to preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where designated oak species are removed from oak woodlands. The mitigation measures, as described above, will ensure that impacts to oak woodlands are less than significant

4.5.4.3 Local

The Chino Basin area encompasses unincorporated county land and nine incorporated cities. Each of these jurisdictions has its own independent General Plan and municipal code that contain limited biological resource management guidelines. The County of San Bernardino and City of Upland have tree removal permits, the City of Fontana, City of Chino Hills, and the City of Rancho Cucamonga contain tree preservation ordinances. The cities of Montclair and Chino do not have ordinances protecting trees.

4.5.5 Thresholds of Significance

The County's IS/EA Form contains six criteria for determining impacts to biological resources in the Environmental Assessment Form. The NOP concluded that the proposed project may result in impacts that may exceed thresholds of significance for the following issue areas and they are discussed in the following section. According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The potential biological changes in the environment are addressed in response to the above thresholds in the following analysis.

4.5.6 Potential Impacts

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The construction and operation of the infrastructure across all Project Categories required to support the CBP may result in direct impacts and indirect impacts on special-status plant species special-status wildlife species, and supporting critical habitat. The extent and nature of impacts on special-status species and supporting habitat varies depending on the species under consideration, their range, and the type and quality of suitable habitats present. These characteristics are portrayed in the graphics provided in Appendix 6 of Volume 2 to this DPEIR, which have been extracted from the SAR HCP.

In general, permanent and temporary direct impacts on special-status species during construction of the future CBP Infrastructure improvements across all Project Categories include potential mortality or injury, and disturbances to suitable habitats for special-status wildlife species, including disruption of wetland and streambeds; water pollution; and reptile, bird, and mammal burrow or nest disturbance. These habitat disturbances within the Chino Basin area, or at specific new or modified facilities locations, could lead to the permanent or temporary loss or abandonment of these habitats by special-status species, a disruption in the life cycle of these species, or direct mortality or injury of individuals of these species. Because it is difficult to determine the number or extent of these kinds of impacts at this stage of the CBP review, direct impacts on special-status species will be addressed in subsequent, project-specific environmental reviews once a specific infrastructure component of the CBP has been defined for site location, design and implementation.

Permanent and temporary indirect impacts on special-status species would occur through construction, maintenance or operational activities associated with future CBP Infrastructure facilities in a number of ways depending on the species and type of disturbance. Potential indirect impacts include erosion, soil compaction, increased siltation and sedimentation, fractures in the hardpan soils or rock outcroppings, alteration of jurisdictional water hydrology, dust aerosolization, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution. These indirect impacts could lead to the disturbance of special-status wildlife species such as a temporary shift in foraging patterns or territories, refugia abandonment, increased predation, decreased reproductive success, and reduced population viability. Because it is difficult to quantify and measure these kinds of impacts, indirect impacts on special-status wildlife species are described qualitatively and will be quantitatively addressed in project specific second-tier environmental evaluations of site specific CBP Infrastructure.

Construction of any specific CBP Infrastructure facility should only result in limited impacts on special-status wildlife species for two reasons. First, construction of a specific infrastructure facility would only disturb a limited amount of marginal habitat for special-status wildlife species (well locations would typically be less than one-acre in size). Second, the location where most of the proposed CBP Infrastructure facilities will be installed or constructed occurs within urban, built-up land, or otherwise disturbed locations (such as IEUA's Regional Plant No. 4 AWPF or paved roadways for conveyance facilities). Refer to **Figure 1** and **Figures 4.5-2. 4.5-3** and **4.5-4** for a comparison of proposed project general site locations and existing land uses, including identified critical habitat locations. Due to this circumstance, CBP construction would potentially impact only those special-status wildlife species that inhabit mostly urban areas (e.g., burrowing

owl, Los Angeles pocket mouse, San Bernardino kangaroo rat, coastal California gnatcatcher, arroyo toad and California glossy snake).

During ongoing operations or maintenance activities requiring ground disturbance, clearing, or grubbing that could cause erosion and sedimentation that could indirectly affect the hydrology of nearby jurisdictional waters and the species that depend on these resources. Chemical runoff from trucks or equipment within the future CBP facility rights-of-way could indirectly degrade suitable habitat used by these species that are present adjacent to or within the management zone boundaries. If operational maintenance requires weed abatement activities, such as the use of herbicides, these activities could also contribute to chemical runoff and pollution of adjacent suitable habitats if the chemicals are used inappropriately. However, maintenance activities that would have potential impacts on special-status species are limited to the program right-of-way areas that are currently in service or that will be added to normal program operations and maintenance through separate design, environmental review and construction of such facilities at a later date. This could include disturbance of nesting birds and mitigation will be implemented to avoid or limit this impact.

Potential impacts on jurisdictional waters, special-status plant communities, protected trees, special-status plant, and wildlife species (including critical habitat) will be analyzed for each facility as site locations are selected and specific designs are established. Once a particular facility area of potential effect (APE) is established, the following steps will be taken during a detailed second-tier evaluation to assure resource impacts are quantified, and site-specific measures are selected from the mitigation measures identified below:

- Where none of the biological resource impacts discussed under **2(a) Conclusion,** below, will occur, no further biological resource impact analysis would be necessary;
- Where potentially significant impacts may occur, but specific mitigation outlined under **Section 4.5.7 Avoidance, Minimization, and Mitigation Measures**, below, can reduce such impacts to a less than significant level, future documentation may rely upon the procedures outlined in Sections 15162 and 15168 of the State CEQA Guidelines to determine the required level of CEQA documentation for future infrastructure projects. Future CBP site-specific projects shall be required to perform these analyses at the time individual CBP Infrastructure improvements are considered for funding and implementation.

1(a) Upper Santa Ana River Watershed, including Prado Basin

As part of meeting the CBP water demands, IEUA critically examined the potential sources of recycled water that might be available in the Upper Santa Ana River Watershed to support the water demand requirements of the CBP AWPF, which is identified as 17,000 acre-feet per year (15,000 of advanced treated water to be recharged to the Chino Basin annually and an estimated 2,000 acre-feet per year to transport the reject water (brine) that will need to be disposed of through the Non-Reclaimable Waste System (NRWS). To meet this CBP demand, IEUA proposes to acquire an estimated 3,500 acre-feet (AF) of reclaimed water from the Rialto Wastewater Treatment Plant (WWTP) and 2,400 AFY of reclaimed water from the Western Riverside County Regional Wastewater Authority (WRCRWA) annually over the life of the CBP. The transfer facilities are shown on **Figure 1** of this document by conveyance pipelines from each facility into the IEUA service area. The remainder of the recycled water delivered to the AWPF would be from IEUA recycled water sources. The transfer of surface water would reduce the flows into the Santa Ana River and into Prado Basin.

Groundwater levels are managed by the Chino Basin Watermaster with the objectives of optimizing groundwater storage capacity while maintaining groundwater levels within the basin to continue supporting riparian and wetland habitat in Prado Basin. A reasonable assumption of the volume of water consumed by Prado Basin wetland/riparian habitat is about 18,000 acre-feet per year (AFY). The IEUA and Western Municipal Water District (WMWD) are responsible for an average annual flow of 42,000 AFY at Prado. However, when their cumulative credits exceed 30,000 AFY (which they currently do and will continue to do so for the foreseeable future), they are responsible for a minimum annual flow of 34,000 AFY. IEUA and WMWD split this responsibility 50/50, thus each agency is responsible for 17,000 AFY of flow at Prado. The CBP is not anticipated to result in the inability of IEUA or WMWD to meet this obligation, and is therefore not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin.

For example, the Watermaster, on behalf of the Chino Basin stakeholders and parties, committed to maintain the current extent of Prado Basin habitat in light of the hydraulic control program initiated in the Peace II SEIR certified in 2010. To ensure that interested agencies have sufficient information to evaluate the effects of hydraulic control, the Watermaster created the Prado Basin Habitat Sustainability Program. This program has been in effect for the past five years, and an annual report of habitat status is compiled and published by the Watermaster. The monitoring itself is not considered mitigation, but the commitment of the Watermaster to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) serves as the mitigation to offset such damage or loss of Prado Basin Habitat.

The habitat within Prado Basin is supported by surface water inflows, rising groundwater, and detention by the Prado Dam. Future flows have been cumulatively modified for Upper Santa Ana River and Prado Basin in the SAR HCP described above. IEUA is a Permittee Agency and is expected to be a participant in the future SAR HCP as described above. In its Executive Summary of Cumulative Biological Impacts in the Upper Santa Ana River Watershed, the SAR HCP DEIR reached the following conclusions for the 22 covered species of concern.

2(a) Conclusion

- Each biological resource will be evaluated for its presence or absence, and for the presence of habitat that could support the resource or provide habitat for the resource. Suitable habitat was determined based on background review and identification of species-specific life-history requirements.
- Potential impacts on special-status wildlife species will be determined using a habitat-based approach where the presence of the species was assumed in suitable habitat. Habitats in the project footprint and vicinity were determined through a combination of background review, habitat mapping during field surveys, and aerial photograph interpretation.
- Potential impacts on designated critical habitat will be based on the location of the critical habitat relative to the project footprint and the presence of primary constituent elements (PCEs) associated with the critical habitat designation.

In determining the potential direct and indirect impacts associated with construction and operation impacts on biological resources, a number of assumptions and limitations are identified:

- Construction and operation impacts will be considered temporary if they can be fully restored to pre-disturbance conditions following construction. Temporary impacts would include construction staging areas, construction laydown areas, relocation of underground

utilities, and other work space that would not be occupied by permanent above-ground facilities during project operation.

- Impacts will be considered permanent when they have lasting effects beyond the project construction period, or cannot be fully restored following construction. Permanent impacts would include new right-of-way for new or expanded facility or water conveyance systems, road crossings, electrical substations, maintenance and operations facilities, and monitoring stations.
- Certain jurisdictional waters types (wetlands) are especially sensitive to disturbance; therefore, impacts on these features will be considered permanent where these features cannot be restored to their pre-project condition due to the permanent loss by new infrastructure.

Finally, IEUA's operational water diversions have a potential to contribute to a cumulative adverse impact on biological resources both in the Upper Santa Ana River channel and Prado Basin. Based on implementing avoidance and mitigation measures in accordance with the mitigation outlined in the SAR HCP DEIR (presented in Appendix 6), the impacts to 21 of the identified covered species can be reduced to a less than cumulatively considerable adverse impact or even beneficial impacts. However, according to the SAR HCP DEIR, the cumulative operational diversions from the SAR may contribute to a significant adverse impact on the Santa Ana sucker. As discussed above, this impact is not unequivocal; it is based on insufficient data to ensure that all of the proposed avoidance and mitigation measures are effective, particularly translocation, which "may not achieve their intended result." IEUA concurs with the preceding cumulative impact findings of the SAR HCP DEIR.

Ultimately, because the Chino Basin contains many areas that may support candidate, sensitive, or special status species, and the specific sites in which future CBP Infrastructure facilities will be developed is presently unknown, or if known, site-specific investigation has not yet begun because the proposed project is at a conceptual level of planning, a significant impact may occur.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

1(b) Critical Habitat

Critical habitat has been designated for several species adjacent to, directly overlapping, or in the general vicinity of the Program area, with significant concentration along the Santa Ana River corridor (refer to **Figure 4.5-5**). One example is the critical habitat designated for the Southwestern willow flycatcher along the Santa Ana River in the Prado Basin. The specific locations of pertinent critical habitat areas are also shown in maps contained in Chapter 6 – Figures of the Biological Resources Report (Appendix 6, Volume 2 of this DPEIR). The primary mitigation for potential impacts to critical habitat will be avoidance. Where avoidance is not feasible, mitigation measures **BIO-1** and **BIO-7** will be implemented. It is rare that critical habitat extends directly within the property owned by IEUA because these areas have already been converted to urban development as shown on **HCP Figures 3-26 through 3-61**. Most of the CBP Infrastructure development will occur in areas between the 60 Freeway and 210 Freeway where minimal critical habitat occurs. However, where either permanent or temporary disturbances will occur within critical habitat, full mitigation will be provided to offset impacts to such habitat. As indicated in the preceding and subsequent discussions on cumulative impacts, certain areas that contain critical habitat for species may not be fully mitigable, and an unavoidable significant adverse biological resource impact may occur. This can only be determined after future project

locations are identified, and design and engineering are completed, and avoidance measures incorporated per specific, necessary project actions. Based on the preceding evaluation of covered species in the SAR HCP, direct construction impacts on critical habitat or covered species can be mitigated to a less than significant level through the SAR HCP implementation. The one exception regarding operational impacts is the potential for impacts to the Santa Ana sucker as described in the preceding text.

2(b) Riparian Habitat or Sensitive Natural Communities

Please review **Table 4.5-2**, Project Area Wildlife Habitat Types, Land Uses, and Typical Vegetation. Additionally, please refer to the discussion under item (a) above. Mitigation is required to address potential impacts to riparian habitat or other sensitive natural communities. Furthermore, the future CBP Infrastructure facilities will be required to prepare site-specific subsequent environmental documentation to minimize impacts to riparian habitat or other sensitive natural communities where applicable, including compensation through acquisition of regulatory permits where appropriate.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

1(c) Wetlands and Other Waters Coordination Summary

Wetlands and other waters in the project vicinity, including waters of the U.S., waters of the State, and State streambeds, are regulated by the federal government (USACE) and the State of California (RWRCB and CDFW). When considering wetlands and other waters, these features are collectively termed jurisdictional waters. Wetlands and other waters are assumed to fall under the jurisdiction of the USACE, SWRCB, and CDFW for purposes of this discussion. The jurisdictional status of these waters will be confirmed by the USACE, SWRCB, and CDFW when the regulatory permitting process is conducted. Further definitions are presented below.

- **Wetlands**: According to the USACE Wetlands Delineation Manual (Environmental Laboratory 1987) and the recently published Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008b), three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation), (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils), and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology). By its Resolution No. 2019-0015, adopted April 2, 2019 by the SWRCB, and thereafter added as section 3013 to Title 23, Division 3, Chapter 23 of the California Code of Regulations, the SWRCB established the following wetlands definition: “An area is a wetlands if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation.”
- **Waters of the U.S.:** The CWA defines waters of the U.S. as follows: (1) all waters that are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce; (4) all

impoundments of waters otherwise defined as waters of the U.S.; (5) tributaries to the foregoing types of waters; and (6) wetlands adjacent to the foregoing waters (33 CFR 328.3[a]). Current status of the Waters of the US Rule continues to change. Any regulatory environment must be reassessed for each future project to determine which rules apply and which permitting may be necessary during the planning and permitting phase.

- **Waters of the State**: Waters of the State are broadly defined by the Porter-Cologne Water Quality Control Act as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code Section 13050(e)). In its Resolution No. 2019-0015, the SWRCB stated that natural wetlands, wetlands created by modification of a surface water of the State, and artificial wetlands that meet certain criteria are Waters of the State.
- **State Streambeds**: CDFW has not released an official definition of lake or streambed and therefore the extent of the area regulated under CFGC Section 1602 remains undefined. However, CDFW jurisdiction generally includes the streambed and bank, together with the adjacent floodplain and lateral extent of riparian vegetation.

Based on the background review and subsequent windshield surveys, numerous jurisdictional waters occur in the Study Area where the CBP Infrastructure will be implemented. Many of the jurisdictional waters (built waterways) are heavily managed by local agencies, which serve public water needs, flood control, and agricultural production. As a result, some of these jurisdictional waters support few natural biological functions and values. The biological functions of these man-made features include limited habitat for wildlife and capacity for water storage or release. A number of these jurisdictional waters have been previously degraded or impacted by existing roads and water resource management infrastructure.

Direct impacts on natural and man-made features include the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources.

Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas.

Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. These discharges would indirectly impact adjacent or downstream jurisdictional waters.

A Jurisdictional Determination and subsequent approval of the determination by the regulatory agencies will be conducted on each facility as the design becomes available and construction of a particular facility is scheduled to occur within the foreseeable future. However, unforeseen direct impacts, indirect impacts, and temporary impacts to natural and man-made water bodies may occur depending upon the design of the infrastructure improvement, and the construction methodology required.

Based on the findings in the SAR HCP DEIR, cumulative impacts to wetlands in the Upper Santa Ana River Watershed can be reduced to a less than significant impact through implementation of the SAR HCP. IEUA is a Permittee Agency and will participate in the cumulative mitigation requirements established by the HCP. For a summary of the SAR HCP findings, please refer to Appendix 6 of Volume 2 to this DPEIR.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Please refer to the discussion under item (a) above. The proposed CBP Infrastructure will be developed primarily within the north central portion of the Chino Basin. There are many stream channels that traverse this area from a north-south direction that could serve to enable movement of native resident or migratory fish or wildlife species, or serve established native resident or migratory wildlife movement corridors, or serve as native wildlife nursery sites. Also note that mitigation to protect nesting birds will be implemented by IEUA where required. As such, future CBP Infrastructure proposals will be required to perform subsequent environmental analyses at the time individual infrastructure improvements are considered for funding. Mitigation is provided below to minimize impacts under this issue to a less than significant level on a project specific basis.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Please refer to the discussion under item (a) above. The proposed CBP will be developed within the Chino Basin including the following areas: Chino, Chino Hills, Fontana, Ontario, Rancho Cucamonga, Upland and unincorporated areas of San Bernardino County. The Basin and CBP area also include limited areas of Riverside County. As such, future CBP infrastructure facilities would be subject to various local ordinances, including the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). As discussed under item (a) above, mitigation identified below is required to minimize impacts to possible local ordinances to a level of less than significant. Mitigation is provided below to accomplish this when a specific CBP Infrastructure location is considered for implementation/approval.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The CBP Infrastructure facilities are generally located within north central portion of the Chino Basin. Although primarily located within urban and developed lands, the whole of the CBP area is located within the draft SAR HCP boundary. One conveyance facility is proposed within part of western Riverside County, and as such, areas located therein are subject to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). This one infrastructure facility is a pipeline that will be installed within an existing road right-of-way. Therefore, no potential conflict with the MSHCP is forecasted to occur. Other Habitat Conservation Plans within the Chino Basin include the Oakmont Industrial Group HCP in Ontario and the North Fontana Multiple Species Habitat Conservation Plan in Fontana. CBP Infrastructure facilities located within these areas (including the MSHCP) would have a potential to conflict with the provisions of a specific Habitat Conservation Plan. Therefore, mitigation is required to minimize impacts to a less than significant level. This mitigation is provided below.

The SAR HCP DEIR summary of biology findings is provided in Appendix 6 of Volume 2 to this DPEIR. This summary indicates all potential cumulative impacts to covered species, except for the Santa Ana sucker, can be reduced to a less than significant cumulative impact. Impacts to the Santa Ana sucker are forecast to potentially experience an unavoidable significant impact based on the findings in the SAR HCP DEIR due to the inability to ensure that all future HCP management measures for SAR will be successful. Refer to Appendix 6 of Volume 2 to this DPEIR for a more in-depth discussion of this issue.

4.5.7 Avoidance, Minimization and Mitigation Measures

Because the individual projects implemented throughout the proposed CBP could result in potentially significant impacts on biological resources, mitigation measures were designed to avoid or reduce the impacts on these resources. The mitigation strategy includes avoidance of impacts on biological resources to the extent feasible: field verification of sensitive resources and filling data gaps; the formulation of alternative designs (minimization and avoidance); limiting modifications to access and egress points to facilities (minimization); designing cuts and fills to minimize the area of disturbance; and where necessary, compensation to offset unavoidable impacts to individual species or sensitive habitat.

The following mitigation measures are required to reduce impacts associated with future program site-specific projects to a less than significant level. As IEUA implements each specific project proposed as part of the CBP, it shall implement the pertinent measures outlined below, as needed, when the impact being mitigated will be caused by such project.

To reduce or prevent activities that may adversely affect any of the 22 sensitive species, the following mitigation measures will be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive biological resources and habitat.

BIO-1 ***All future CBP Infrastructure projects shall be required to consult with a qualified professional to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a qualified professional, in any case in which a future CBP Infrastructure project will affect undeveloped land, or in which IEUA seeks State Funding, site surveys shall be conducted in accordance with appropriate standards by a qualified biologist/ecologist, except where such surveys have already been conducted (i.e., at RP-4). If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the CNDDB will be notified and the following subsequent mitigation actions will be taken:***

- ***a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.***
- ***b. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. IEUA shall retain a copy of the incidental take permit as verification that the mitigation of significant biological resource impacts at a project site with sensitive biological resources has been accomplished.***
- ***c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted in areas that were not previously***

surveyed because of access or timing issues or project design changes; pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species. If special-status plants or plant communities are identified, the following hierarchy of actions shall be taken: a) find an alternative site; b) avoid the plants and maintain them onsite after completing the project; or c) provide compensatory mitigation offsite.

BIO-2 Biological Resources Management Plan (BRMP): During final design and prior to issuance of construction permits, a BRMP will be prepared to assemble the biological resources mitigation measures for each specific infrastructure improvement in the future. The BRMP will include terms and conditions from applicable permits and agreements and make provisions for monitoring assignments, scheduling, and responsibility. The BRMP will also discuss habitat replacement and revegetation, protection during ground-disturbing activities, performance (growth) standards, maintenance criteria, and monitoring requirements for temporary and permanent native plant community impacts. The parameters of the BRMP will be formed with the mitigation measures from subsequent CEQA documentation, including terms and conditions as applicable from the USFWS, USACE, SWRCB/RWQCB, and CDFW.

To reduce or prevent activities that may adversely affect rivers, streambeds or wetlands, the following mitigation measures will be incorporated into any specific projects and/or contractor specifications for future project-related impacts to protect sensitive resources and habitat.

BIO-3 Prior to discharge of fill or streambed alteration of state or federal water jurisdictional areas, IEUA shall obtain regulatory permits from the U.S. Army Corps of Engineers, local Regional Water Quality Control Board and the California Department of Fish and Wildlife as required. Any future project that must discharge fill into a channel or otherwise alter a streambed shall be minimized to the extent feasible, and any discharge of fill not avoidable shall be mitigated through compensatory mitigation. Mitigation can be provided by restoration of temporary impacts, enhancement of existing resources, or purchasing into any authorized mitigation bank or in-lieu fee program; by selecting a site of comparable acreage near the site and enhancing it with a native riparian habitat or invasive species removal in accordance with a habitat mitigation plan approved by regulatory agencies; or by acquiring sufficient compensatory habitat to meet regulatory agency requirements. Typically, regulatory agencies require mitigation for jurisdictional waters without any riparian or wetland habitat to be mitigated at a 1:1 ratio. For loss of any riparian or other wetland areas, the mitigation ratio will begin at 2:1 and the ratio will rise based on the type of habitat, habitat quality, and presence of sensitive or listed plants or animals in the affected area. A Habitat Mitigation and Monitoring Proposal shall be prepared and reviewed and approved by the appropriate regulatory agencies. IEUA will also obtain permits from the regulatory agencies (U.S. Army Corps of Engineers, Regional Water Quality Control Board, CDFW and any other applicable regulatory agency with jurisdiction over the proposed facility improvement) if any impacts to jurisdictional areas will occur. These agencies can impose greater mitigation requirements in their permits, but IEUA will utilize the ratios outlined above as the minimum required to offset or compensate for impacts to jurisdictional waters, riparian areas or other wetlands.

BIO-4 Jurisdictional Water Preconstruction Surveys: A federal and state jurisdictional water preconstruction survey will be conducted at least three months before the start of ground-disturbing activities to identify and map all jurisdictional waters in the project footprint and up to a 250-foot buffer around the project footprint, subject to legal property access restrictions. The purpose of this survey is to confirm the extent of jurisdictional waters within the project footprint and adjacent up to 250-foot buffer. If possible, surveys would be performed during the spring, when plant species are in bloom and hydrological

indicators are most readily identifiable. These results would then be used to calculate impact acreages and determine the amount of compensatory mitigation required to offset the loss of wetland functions and values.

Regarding active bird nests, the following mitigation measure will be applied to this program.

BIO-5 To avoid an illegal take of active bird nests, any grubbing, brushing or tree removal will be conducted outside of the State identified nesting season (nesting season is approximately from February 15 through September 1 of a given calendar year). Alternatively, a nesting bird survey that demonstrates that no bird nests will be disturbed during project construction can be conducted by a qualified biologist no more than 14 days prior to initiation of ground disturbance; construction may only commence once a qualified biologist has demonstrated that no nesting birds are present at a given site. IEUA shall coordinate with the CDFW to identify the appropriate nesting bird survey protocol. The results of the nesting bird survey will be documented in a report submitted by the avian biologist to IEUA. IEUA, in coordination with CDFW and USFWS (as appropriate), may designate nest buffers outside of which construction activities may be allowed to proceed.

The following mitigation can reduce the impact to burrowing owl to a less than significant level.

BIO-6 All future CBP Infrastructure projects shall be required to consult with a qualified professional to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl survey by a qualified professional, or in locations that are not fully developed, a protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed in coordination with CDFW and submitted to IEUA that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.

The following mitigation can ensure consistency with any HCP or MSHCP.

BIO-7 Prior to commencement of construction activity on a project facility within a MSHCP/HCP plan area, consistency with that plan, or take authorization through that plan, shall be obtained. Through avoidance, compensation or a comparable mitigation alternative, each project shall be shown to be consistent with a MSHCP/HCP.

Implementation of the above measures is protective of the environment. Should the regulatory agencies determine an alternative, equivalent mitigation program during acquisition of regulatory permits, such measure shall be deemed equivalent to the above measures and no additional environmental documentation shall be required to implement a measure different than outlined above. Note that if impacts cannot be mitigated or avoided in the manner outlined in the measures above, then subsequent environmental documentation would have to be prepared in accordance with procedures outlined in Section 15162 of the State CEQA Guidelines.

Implementation of the following mitigation measures will ensure that project design and site selection reduce impacts to sensitive biological resources to the extent feasible.

BIO-8 ***During the design phase of future CBP Infrastructure projects, IEUA shall place primary emphasis on the preservation of large, unbroken blocks of natural open space and wildlife habitat area, and protect the integrity of habitat linkages. As part of this emphasis, IEUA shall facilitate programs for purchase of lands, clustering of development to increase the amount of preserved open space, and assurances that the construction of facilities or infrastructure improvements meet standards identical to the environmental protection policies applicable to the specific facilities improvement.***

BIO-9 ***Require facility designs and maintenance activities to be planned to protect habitat values and to preserve significant, viable habitat areas and habitat connection in their natural conditions. A qualified biologist shall be retained to determine the scope of the following for a given project site:***

- ***a. Within designated habitat areas of rare, threatened or endangered species, prohibit disturbance of protected biotic resources.***
- ***b. Within riparian areas and wetlands subject to state or federal regulations, riparian woodlands, oak and walnut woodland, and habitat linkages, require that the vegetative resources which contribute to habitat carrying capacity (vegetative diversity, faunal resting sites, foraging areas, and food sources) are preserved in place or replaced so as not to result in a measurable reduction in the reproductive capacity of sensitive biotic resources.***
- ***c. Within habitats of plants listed by the CNDDB or CNPS as "special" or "of concern," require that new facilities do not result in a reduction in the number of these plants, if they are present.***

BIO-10 ***Maximize the preservation of individual oak, sycamore and walnut trees within proposed CBP Infrastructure sites. Preservation is defined within this measure as follows: existing oak, sycamore and walnut trees within a given Project site shall be retained within the site to the maximum extent feasible except where their preservation would interfere with functional and reasonable project design. Where the preservation of individual trees is not possible, IEUA shall comply with the local jurisdiction's tree ordinance, municipal code, or other local regulations. If no tree ordinance exists within the local jurisdiction, and a project will remove healthy trees as defined by a qualified arborist, (1) IEUA shall replace all trees removed at a 1:1 ratio, and (2) the specific location selected for a well shall avoid rock outcroppings and other scenic resources as defined in CEQA Guidelines Appendix G. If this cannot be accomplished a second tier CEQA evaluation shall be completed.***

BIO-11 ***Require the establishment of buffer zones adjacent to areas of biological resources as recommended and defined by the site biologist. Such buffer zones shall be of adequate width to protect biological resources from grading and construction activities, as well as from the long-term use of adjacent lands. Permitted land modification activities with preservation and buffer areas are to be limited to those that are consistent with the maintenance of the reproductive capacity of the identified resources. The land uses and design of project facilities adjacent to a vegetative preservation area, as well as activities within the designated buffer area are not to be permitted to disturb natural drainage patterns to the point that vegetative resources receive too much or too little water to permit their ongoing health. In addition, landscape adjacent to areas of preserved biological resources shall be designed so as to avoid invasive species which could negatively impact the value of the preserved resource.***

Implementation of the following mitigation measures will ensure that project construction impacts to sensitive biological resources, including the potential effects of invasive species, are reduced to the extent feasible.

BIO-12 ***As part of completion of the final site development, after ground disturbance has occurred within or adjacent to any natural area, the disturbed areas shall be revegetated using a plant mix of native plant species that are suitable for long term vegetation management at the specific site, which shall be implemented in cooperation with regulatory agencies and with oversight from a qualified biologist. The seeds mix shall be verified to contain the minimum amount of invasive plant species seeds reasonably available for the project area.***

BIO-13 ***Clean Construction Equipment. During construction, equipment will be washed before entering the project footprint to reduce potential indirect impacts from inadvertent introduction of nonnative invasive plant species. Mud and plant materials will be removed from construction equipment when working in native plant communities, near special-status plant communities, or in areas where special-status plant species have been identified.***

BIO-14 ***Contractor Education and Environmental Training.***

Personnel who work onsite will attend a Contractor Education and Environmental Training session conducted by a qualified biologist. The environmental training will cover general and specific biological information on the special-status plant species that may be present near the construction site, including the distribution of the resources, the recovery efforts, the legal status of the resources, and the penalties for violation of project permits and laws.

The Contractor Education and Environmental Training sessions will be given before the initiation of construction activities and repeated, as needed, when new personnel begin work within the project limits. Daily updates and synopsis of the training will be performed during the daily safety ("tailgate") meeting. All personnel who attend the training will be required to sign an attendance list stating that they have received the Contractor Education and Environmental Training, and such tracking sheets shall be maintained for inspection by IEUA.

BIO-15 ***Biological Monitor to Be Present during Construction Activities in areas where impacts to Riparian, Riverine, Wetland, Endangered Species or Endangered Species critical habitat occurs. A biological monitor (or monitors) will be present onsite during construction activities that could result in direct or indirect impacts on sensitive biological resources (including listed species) and to oversee permit compliance and monitoring efforts for all special-status resources.***

A biological monitor (qualified biologist) is any person who has a bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field and/or has demonstrated field experience in and knowledge about the identification and life history of the special-status species or jurisdictional waters that could be affected by project activities. The biological monitor(s) will be responsible for monitoring the construction contractor to ensure compliance with the Section 404 Individual Permit, Section 401 Water Quality Certification and the Lake and Streambed Alteration Agreement. Activities to ensure compliance would include performing construction-monitoring activities, including monitoring environmental fencing, identifying areas where special-status plant species are or may be present, and advising the Contractor of methods that may minimize or avoid impacts on these resources. Biological monitor(s) will be required to be present in all areas during ground disturbance activities and for all construction activities conducted within or adjacent to identified Environmentally Sensitive Areas, Wildlife Exclusion Fencing, and Non-Disturbance Zones as defined by the project biologist.

BIO-16 Food and Trash: All food-related trash items (e.g., wrappers, cans, bottles, food scraps) will be disposed of in closed containers and removed at least once a week from the construction site.

BIO-17 Rodenticides and Herbicides: Use of rodenticides and herbicides in the project footprint will be restricted at the direction of the project biologist. This measure is necessary to prevent poisoning of special-status species and the potential reduction or depletion of the prey populations of special–status wildlife species. Where pesticides must be used, they must be used in full accordance with use instructions for the particular chemical and at the direction of the project biologist.

BIO-18 Wildlife Exclusion Fencing: Exclusion barriers (e.g., silt fences) will be installed at the edge of the construction footprint and along the outer perimeter of Environmentally Sensitive Areas and Environmentally Restricted Areas as defined by the project biologist prior to the commencement of construction activities to restrict special-status species from entering the construction area during construction. The design specifications of the exclusion fencing will be determined through consultation with the USFWS and/or CDFW, as appropriate. Clearance surveys will be conducted for special-status species after the exclusion fence is installed in compliance with USFWS and/or CDFW requirements. The project biologist shall determine the frequency in which clearance surveys will be conducted to determine the efficacy of the exclusion fencing.

BIO-19 Equipment Staging Areas: Prior to the commencement of construction, the Project Proponent shall identify staging areas for construction equipment to be utilized during construction that will be located outside sensitive biological resources areas, including habitat for special-status species, jurisdictional waters, and wildlife movement corridors.

BIO-20 Plastic mono-filament netting (erosion-control matting) or similar material will <u>not</u> be used in erosion control materials to prevent potential harm to wildlife. Materials such as coconut coir matting or tackified hydroseeding compounds will be used as substitutes.

BIO-21 Vehicle Traffic: During ground-disturbing activities, project-related vehicle traffic will be restricted within the construction area to established roads, construction areas, and other designated areas to prevent avoidable impacts. Access routes will be clearly flagged, to ensure traffic outside of the designated areas will be prohibited.

BIO-22 Entrapment Prevention: All excavated, steep-sided holes or trenches more than 8 inches deep will be covered at the close of each working day with plywood or similar materials, or a minimum of one escape ramp constructed of earth fill for every 10 feet of trenching will be provided to prevent the entrapment of wildlife. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. All culverts or similar enclosed structures with a diameter of 4 inches or greater will be covered, screened, or stored more than 1 foot off the ground to prevent use by wildlife. Stored material will be cleared for common and special-status wildlife species before the pipe is subsequently used or moved.

BIO-23 Weed Control Plan: Prior to the commencement of construction, a Weed Control Plan will be developed for IEUA by the project biologist to minimize or avoid the spread of weeds during ground-disturbing activities. In the Weed Control Plan, the following topics will be addressed:

- ***A schedule for noxious weed surveys shall be addressed.***
- ***Weed control treatments shall be addressed and ultimately implemented by IEUA, including permitted herbicides, and manual and mechanical methods for application; herbicide application will be restricted in Environmentally Sensitive Areas (as defined by the project biologist).***

- ***The timing of the weed control treatment for each plant species shall be addressed.***
- ***Fire prevention measures shall be addressed.***

IEUA shall maintain records demonstrating implementation of the Weed Control Plan, and shall make those records available to inspection by regulatory agency upon request.

BIO-24 Dewatering/Water Diversion Plan: If construction is planned to occur where there is open or flowing water, prior to the commencement of construction IEUA shall submit the Dewatering Plan prepared in coordination with the resource agencies (e.g., USACE, SWRCB/RWQCB, and CDFW, as appropriate). The Dewatering Plan shall identify how open or flowing water will be routed around construction areas, such as through the creation of cofferdams. If cofferdams are constructed, implementation of the following cofferdam or water diversion measures shall be implemented to avoid and lessen impacts on jurisdictional waters during construction:

- ***The cofferdams, filter fabric, and corrugated steel pipe are to be removed from the creek bed after completion of the project.***
- ***The timing of work within all channelized waters is to be coordinated with the regulatory agencies.***
- ***The cofferdam is to be placed upstream of the work area to direct base flows through an appropriately sized diversion pipe. The diversion pipe will extend through the Contractor's work area, where possible, and outlet through a sandbag dam at the downstream end.***
- ***Sediment-catch basins immediately below the construction site are to be constructed when performing in-channel construction to prevent silt- and sediment-laden water from entering the main stream flow. Accumulated sediments shall be periodically removed from the catch basins.***

BIO-25 Permanent Water Diversion Projects: IEUA shall continue to support preparation of the annual Prado Basin Habitat Sustainability Monitoring Program. IEUA shall conduct a second-tier CEQA evaluation for a proposed water diversion project associated with the CBP. The potential impacts to Prado Basin and sensitive habitat (for example riparian, wetland, or critical habitat) from implementation of such diversion projects shall receive public review, including pertinent wildlife management agencies and interested parties.

BIO-26 Landscaping at Future CBP Infrastructure Sites: IEUA shall require that any landscaping at future CBP Infrastructure sites shall be landscaped with water-wise or xeric landscape plants (native plants where feasible) to minimize future water demand.

Not every project will be required to implement all of the above mitigation measures. IEUA shall select pertinent mitigation measures for the specific project site and operating impacts of the proposed project. Implementation of the project specific mitigation measures is considered adequate to minimize construction-related impacts to the extent feasible, including the potential for invasive species occupancy caused by project-related disturbance of natural areas. IEUA shall also implement the seven biology mitigation measures contained in the SAR HCP DEIR (a copy of these measures is provided in Appendix 6 of Volume 2 to this DPEIR of this document) where they provide additional support to protect the 22 covered species.

4.5.8 Cumulative Impacts

Cumulative biological resource impacts can only occur when such resources are not avoided, protected or mitigated as outlined above. The mitigation requirements outlined in Section 4.5.7 are identified to ensure that biological resources are avoided or otherwise protected or mitigated, such that the only cumulatively considerable impacts to significant biological resources are forecast to occur are to the Santa Ana sucker, as the mitigation available to protect this species

cannot conclusively protect it from being significantly impacted by cumulative diversions from the Santa Ana River.

These impacts may include direct impacts such as the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas.

In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Therefore, these impacts should be quantified and analyzed in a second-tier environmental evaluation.

As addressed in Subsection 4.5.6 above, the proposed CBP project operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordnances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub. To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, the SAR HCP has determined that potential impacts of water management agencies in the Upper Santa Ana River Watershed that cumulative impacts to covered species and supporting habitat can be mitigated by implementing the HCP, except for one species. As such, the project would contribute cumulatively considerable impacts to the Santa Ana sucker. The SAR HCP DEIR concluded that such impacts should be treated as cumulatively considerable and unavoidably significant given the possibility that the effectiveness of some of the HCP mitigation measures cannot be guaranteed to be successful. As a contributor to this cumulative effect and a Permittee Agency, IEUA concurs with this finding.

It should be noted that one of the key objectives of the CBP is to "Develop an Integrated Solution to Produce State and Federal Environmental Benefits." The CBP would develop a highly reliable new water supply formally dedicated to environmental benefit that can be deployed dynamically and managed flexibly to address varying and changing ecological needs. Specifically, the CBP would result an exchange of new water supplies in the Chino Basin for SWP supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and to achieve environmental benefits. As such, while the CBP would contribute to cumulatively considerable impacts given the possibility that the effectiveness of some of the HCP mitigation measures aimed at protecting the Santa Ana sucker cannot be guaranteed to be successful, the CBP would provide environmental benefit in call years, which will likely be in dry seasons, to improve habitat conditions enabling salmonid species greater chance for survival.

4.5.9 Unavoidable Adverse Impacts

Because the specific locations for future CBP Infrastructure projects are not presently known, specific investigation has not yet begun because the proposed project is at a conceptual level of planning. Thus, there is a potential that a future CBP Infrastructure facility may be developed in an area containing significant biological resources that cannot be avoided or the operation of the CBP will contribute to cumulatively considerable impacts to a listed species. Though substantial mitigation is provided to minimize impacts under most circumstances for future CBP Infrastructure facilities, no feasible mitigation exists to completely avoid impacts to biological resources within the Chino Basin. Thus, the proposed project is forecast to cause significant unavoidable adverse impact to biological resources, specifically implementation of the CBP will contribute cumulatively to potential significant impacts to the Santa Ana sucker.

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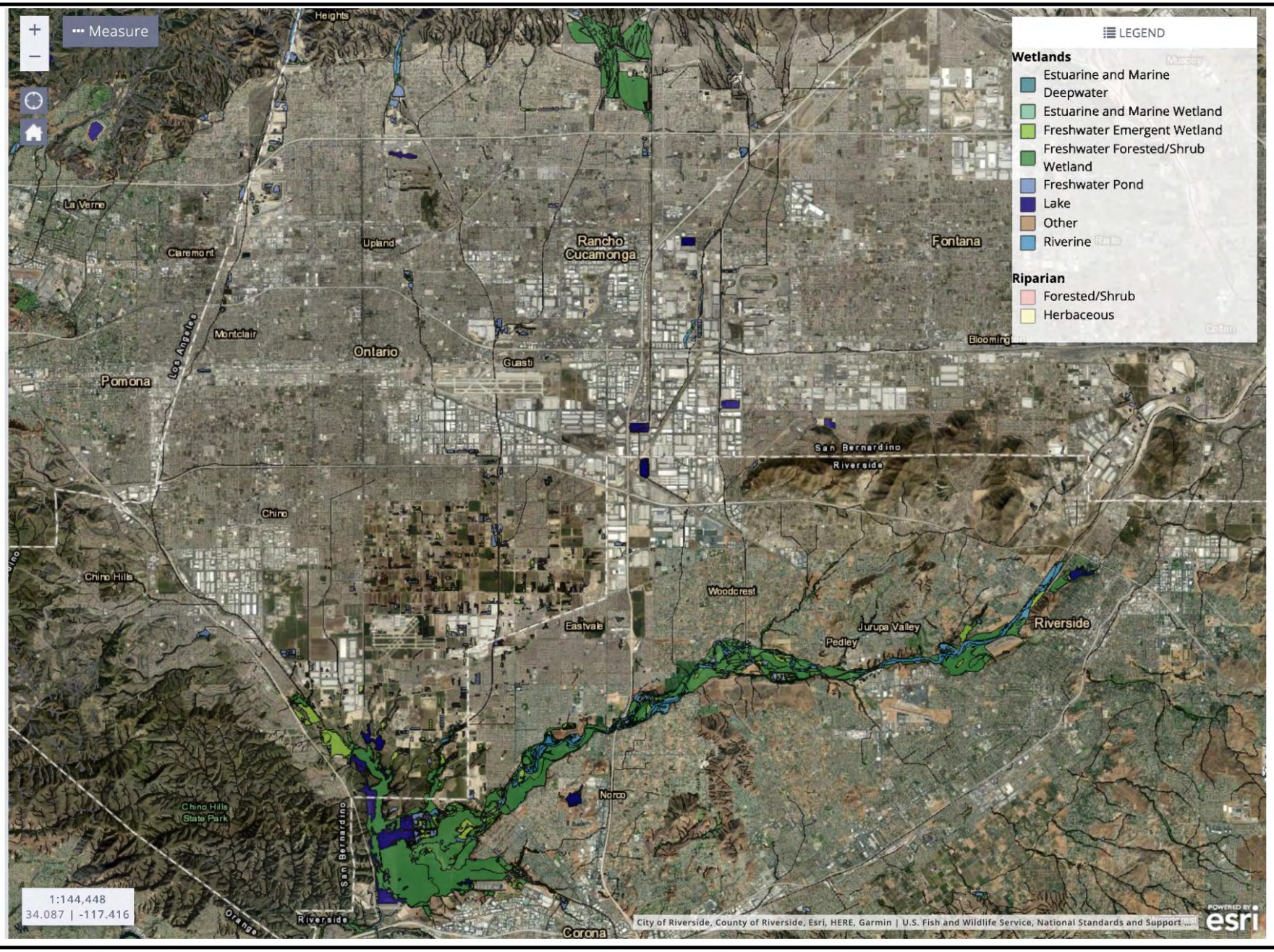

FIGURE 4.5-1

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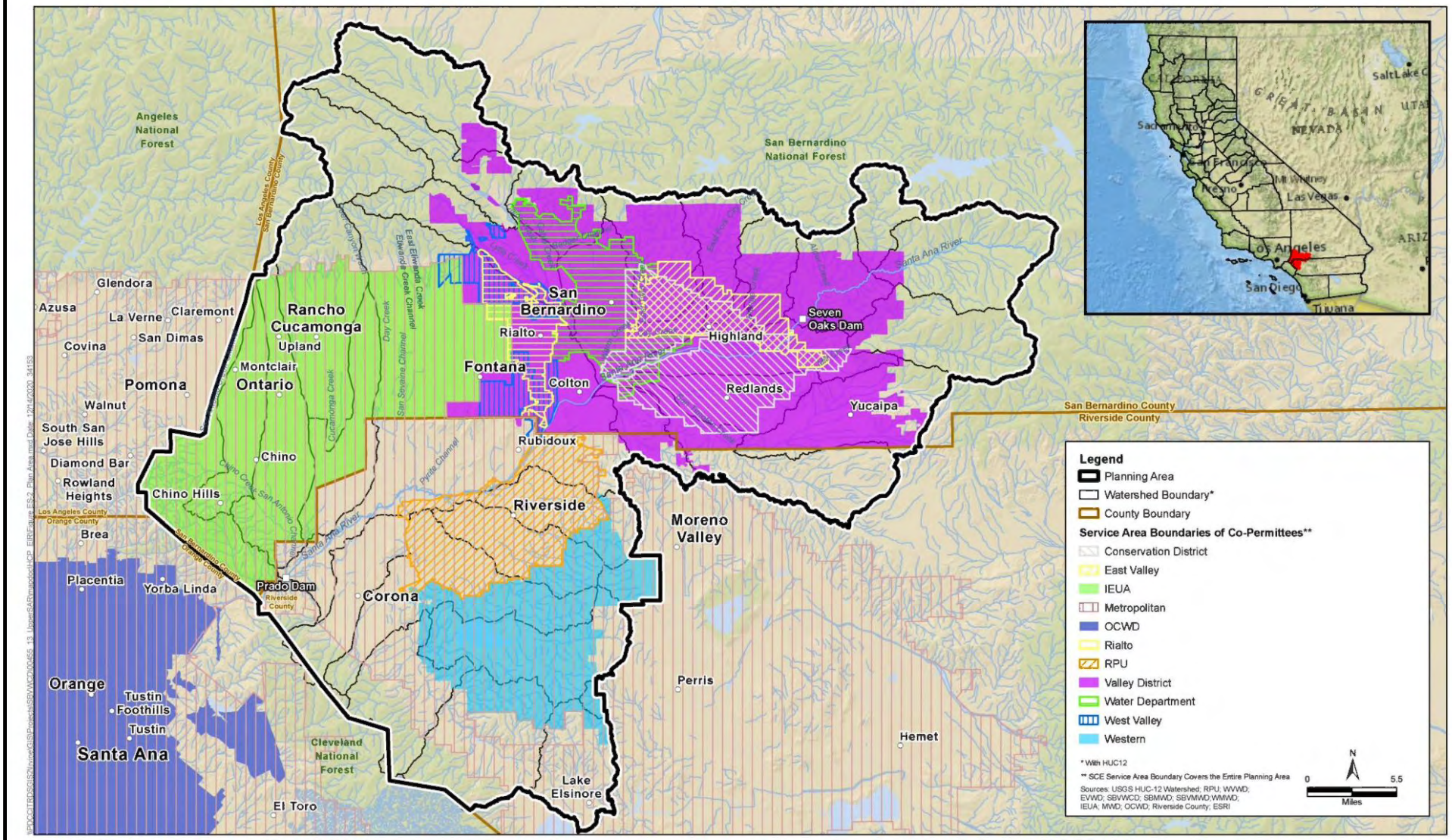
Environmental Consultants

Wetlands / Riparian Map



SOURCE: SAR HCP DEIR (Figure ES-2)

FIGURE 4.5-2

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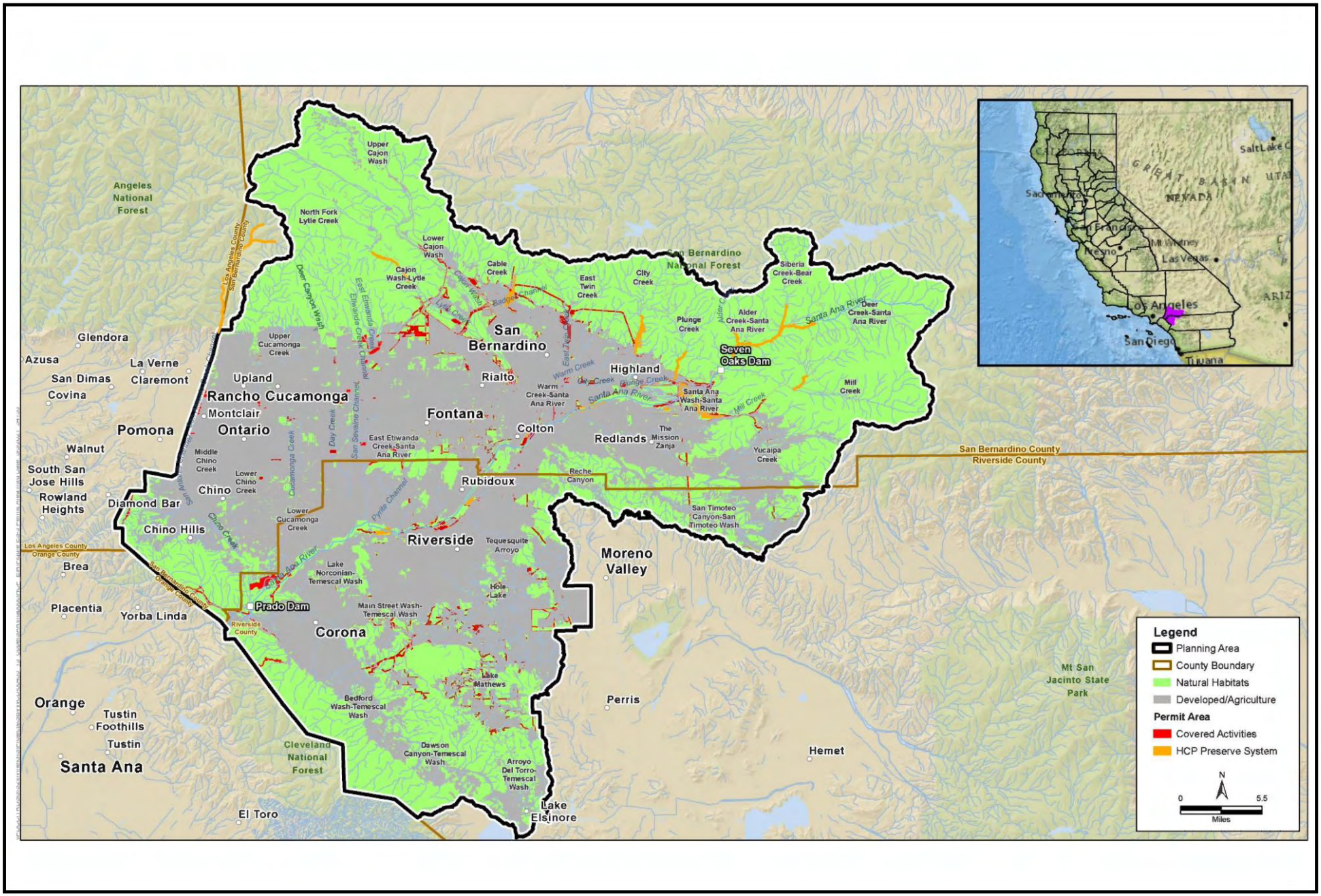
Planning Areas



SOURCE: SAR HCP DEIR (Figure ES-3)

FIGURE 4.5-3

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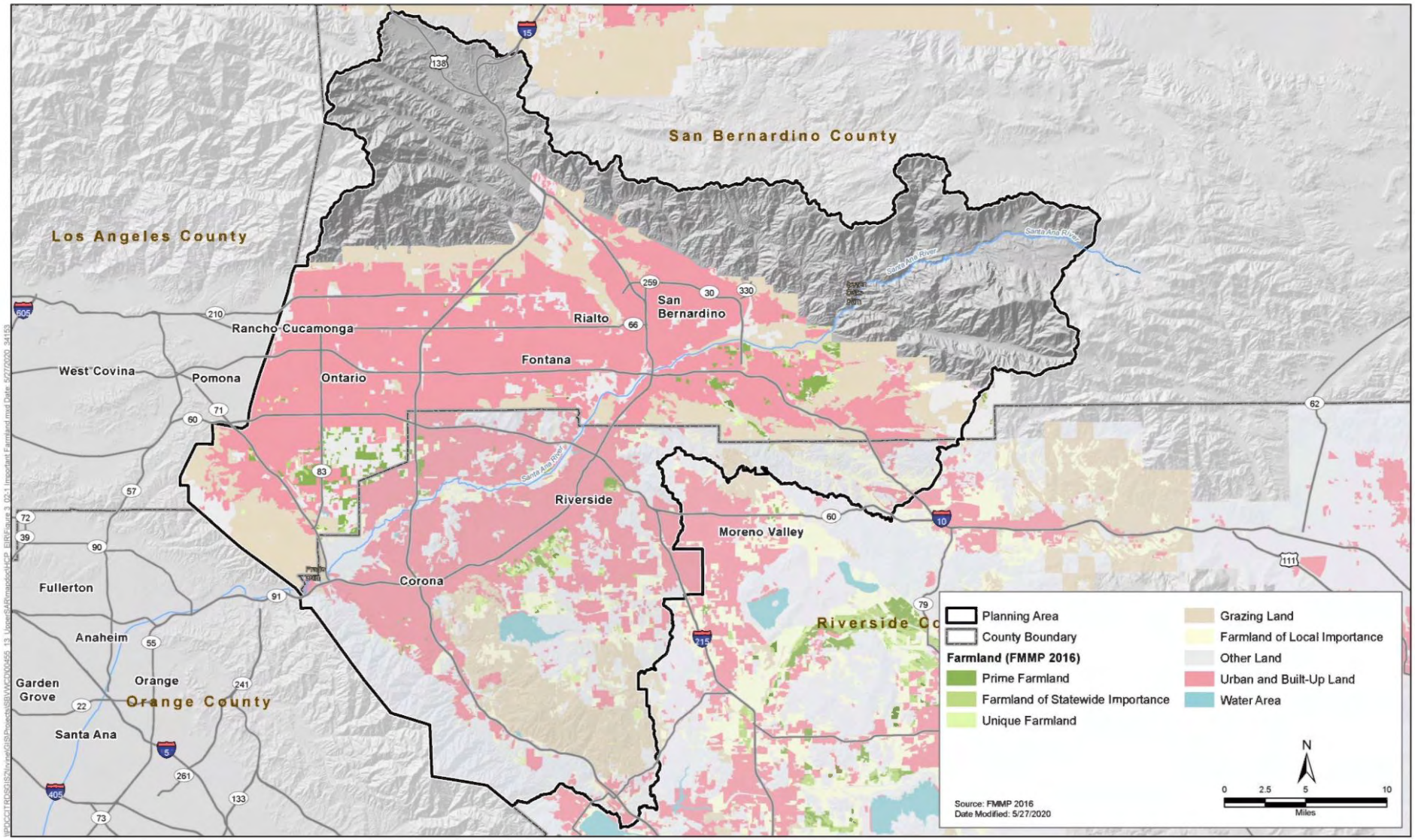
Environmental Consultants

Permit Areas

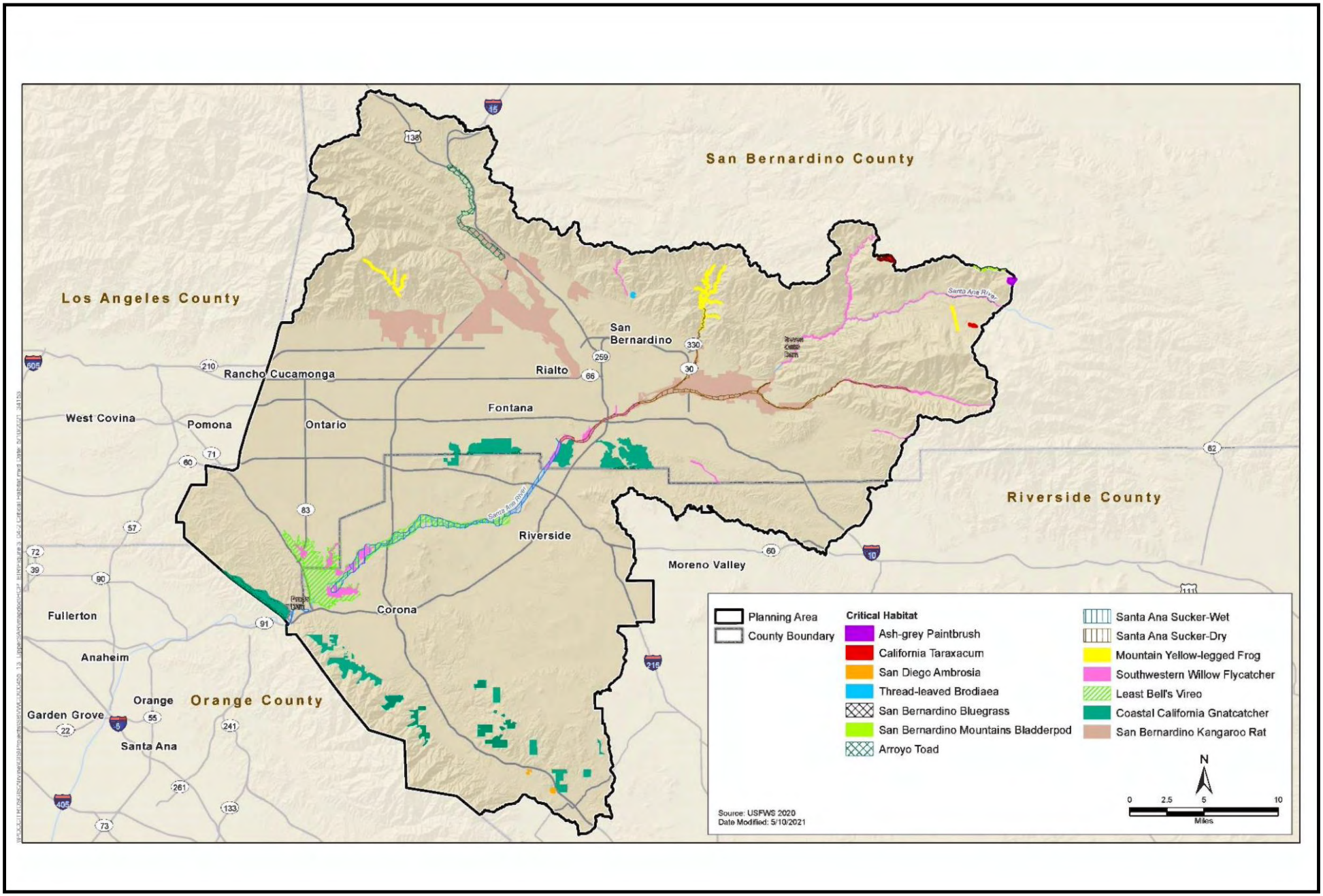


SOURCE: SAR HCP DEIR (Figure 3.2-1)

FIGURE 4.5-4

Tom Dodson & Associates
Environmental Consultants

Important Farmland



SOURCE: SAR HCP DEIR (Figure 3.4-2)

FIGURE 4.5-5

Tom Dodson & Associates
Environmental Consultants

Critical Habitat in the Planning Area

4.6 CULTURAL RESOURCES

4.6.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue area of cultural resources from implementation of the Chino Basin Program (CBP). The following topics address whether the proposed Project would alter or destroy an historic site; cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.4 of the State CEQA Guidelines; alter or destroy an archaeological site; cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.4; or, disturb any human remains, including those interred outside of formal cemeteries; restrict existing religious or sacred uses within the potential impact area. The purpose of the cultural resources component of this Draft Program Environmental Impact Report (DPEIR) is to provide a spatial analysis of previously identified cultural resources and assess the potential for as-yet undocumented historical, archaeological, or paleontological resources to be encountered within the CBP project area. In this way, the sensitivity for such resources to be encountered in a specific project area can be incorporated into the planning process for future statutory/regulatory compliance considerations. Much of the information contained in this Subchapter is abstracted from a cultural report provided by CRM Tech in 2020 compiled to support the OBMPU Subsequent Environmental Impact Report.

"Cultural resource" is primarily a term representing the physical evidence or a place associated with past human activity. Because paleontological resources (fossil remains) can be exposed through grading, excavation, and other ground-disturbing activities, they are also considered under the cultural resources component for the purposes of this DPEIR. Cultural resources can be a building, structure, site, landscape, object, or natural feature that can be characterized temporally as prehistoric or historical in origin:

- Prehistoric cultural resources are the result of cultural activities of the ancestors and predecessors of contemporary Native Americans, and often retain traditional and spiritual significance to them. Examples of prehistoric cultural resources include the archaeological remains of Native American villages and campsites; food processing, lithic resource procurement, or tool-making localities; and human burials and cremations. They may also consist of trails, rock art and geoglyphs, and isolated artifacts.
- Historical cultural resources are any human-made environmental features that provide a setting for human activity during the historic period, from the beginning of European colonization to 50 years before present (B.P.). Examples include buildings, structures, and their remains; roads, irrigation works, and other infrastructure/engineering features; and refuse deposits. They may relate to mission activities, travel and exploration, settlement and homesteading, cattle and sheep herding, mining, agriculture, industrial and commercial development, and urban/suburban expansion, among other themes. In the Chino Basin area, historical cultural resources may date to as early as the Spanish exploration period in the late 18th century.
- Paleontological resources represent the remains of prehistoric plant and animal life, exclusive of any human remains, and include the localities where fossils were collected as well as the rock formations in which they were found. Common fossil remains include marine shells; bones and teeth of fish, amphibians, reptiles, and mammals; leaf assemblages; and petrified wood. Fossil traces, another type of paleontological resource, are internal and external molds (impressions) and casts created by these organisms. Because of the infrequency of fossil preservation, they are considered nonrenewable resources. All vertebrate fossils are considered to be significant, while other kinds of

paleontological resources must be evaluated individually for significance depending on their potential scientific value.

Cultural Resource issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Cultural Resources
- Sensitivity Assessment
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Unavoidable Adverse Impacts

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One comment letter regarding cultural resources issues was raised as part of the Notice of Preparation. No comments were received at the scoping meeting held for the proposed Project.

Comment Letter #2 from Native American Heritage Commission (NAHC) (dated 9/20/21) states:

- *This letter summarizes the applicability of AB 52 and SB 18 to a given project.*
- *This letter summarizes AB 52 requirements.*
- *This letter summarizes SB 18 requirements.*

- *This letter summarizes recommendations for Cultural Resource Assessments as follows:*
  - *The IEUA should contact the appropriate California Historical Research Information System (CHRIS) Center for an archaeological records search*
  - *Archaeological surveys, where required, should be prepared in a professional report.*
  - *The NAHC should be contacted for a sacred lands file search and to procure a Native American Tribal Consultation List*
  - *Lack of surface evidence does not preclude the existence of subsurface evidence and as such, the IEUA should include mitigation that addresses the potential for inadvertent discovery, provisions for the deposition of cultural items, and include provisions for the treatment and disposition of native American human remains.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

The following information has been prepared by CRM TECH, a cultural resources firm, with minor edits to fit the focus of this DPEIR. Appendix 7, Volume 2 to this DPEIR contains a site specific cultural resources evaluation for RP-4, at which the AWPF is proposed, which has been prepared by CRM TECH.

4.6.2 Environmental Setting: Cultural Resources

4.6.2.1 Geology and Paleontology

The defining character of fossils or fossil deposits is their geologic age, which is typically regarded as predating the end of the Pleistocene Epoch (approximately 11,700 B.P.), but even fossils dating to the beginning of the middle Holocene Epoch, or circa 5,000 radiocarbon years B.P., may be considered paleontological resources. Fossil resources generally occur only in areas of sedimentary rock, such as sandstone, siltstone, mudstone, claystone, and shale.

A formation or rock unit has paleontological sensitivity or the potential for scientifically significant paleontological resources if it has previously yielded, or has lithologies conducive to the preservation of, vertebrate fossils and associated or regionally uncommon invertebrate and plant fossils. All sedimentary rocks, except those younger than 5,000 years, are considered to have potential for paleontological resources, as are certain extrusive volcanic rocks and mildly metamorphosed rocks.

Occasionally fossils may be exposed at the surface through the process of natural erosion or because of human disturbances, but they generally lay buried beneath the surficial soils. Thus, the absence of fossils on the surface does not preclude the possibility of their presence in subsurface deposits, while fossil remains exposed at the surface is often a good indication that more could be found subsurface.

Across the CBP project area, the vast majority of the surface geology is mapped as Young Alluvial Fan Deposits of Holocene to Late Pleistocene (less than 129,000 years B.P.) age, with some Very Old Alluvial Fan Deposits from the Early Pleistocene Epoch (773,000-2.58 million years B.P.). A more detailed discussion of geologic units mapped at the surface within the planning area is presented below.

4.6.2.2 Prehistory/Ethnohistory

The Chino Basin region lies mostly within the traditional territory of the Gabrielino (known also as the Gabrieleño by the Spaniards, a spelling that is often used in present day), a Native American group believed to have been the most populous and most powerful ethnic nationality in aboriginal Southern California. Gabrielino territory was centered in the Los Angeles Basin, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The Gabrielino's territorial claim in the Riverside-San Bernardino County portion of the planning area overlapped another prominent Native American group, the Serrano, whose traditional homeland was centered in the San Bernardino Mountains, including the slopes and lowlands on the northern and southern flanks of the mountains and extending eastward as far as present-day Twentynine Palms.

Depending on the natural environment in which they were located, native groups adopted different types of subsistence economy, although they were all based on gathering, hunting, and/or fishing. As a result, ancient occupation sites in valleys and foothills often contain portable mortars and pestles along with large projectile points, suggesting a reliance on fleshy nut foods and, to a lesser extent, large game animals. Sites found in the more arid areas in inland Southern California often contain fragments of flat slab metates and plano-convex scrapers along with numerous projectile points, suggesting a reliance on seed resources, plant pulp, and smaller game animals. Temporary use sites tended to be clustered around bay/estuary environments and intermontane drainages such as the Santa Ana River.

The Gabrielino came into contact with the Spanish as early as 1542, during the expedition of Juan Rodríguez Cabrillo. In the early Spanish period, several Indian villages or rancherías were known to be present amid the foothills and valleys on the southern slopes of the San Gabriel and San Bernardino Mountains. Beginning in 1769, the Spaniards took steps to colonize Gabrielino territory. In the process, most of the Gabrielino people were incorporated into Mission San Gabriel and other missions in Southern California.

Due to their location further inland and mostly at higher elevations, Spanish influence on Serrano lifeways was minimal until the 1810s, when an assistencia affiliated with Mission San Gabriel was established in present-day Loma Linda, on the southern edge of the Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the San Bernardino Mountains were also moved to the nearby missions.

Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrielino and Serrano populations dwindled rapidly. By 1900, the Gabrielino had almost ceased to exist as a culturally identifiable group, according to the leading ethnohistoric accounts. The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations. In modern times, there has been a renaissance of Native American activism and cultural revitalization among the Gabrielino and the Serrano. Tribal members today are keenly aware of archaeological sites and places of special cultural significance and maintain a high level of interest in how these sites are managed.

4.6.2.3 History

In the early and mid-1770s, Francisco Garcés's exploration and the subsequent Juan Bautista de Anza expedition marked the first times when Europeans set foot in the Chino Basin area. Despite these early visits, for the next 40 years the Inland Empire region received little impact from the

Spanish colonization activities in Alta California, which were concentrated mainly along the coastline. Following the establishment of Mission San Gabriel in 1771, the area became nominally a part of the vast landholdings of that mission.

After gaining independence from Spain in 1821, the Mexican government began to dismantle the mission system through the process of secularization, whereby former mission landholdings throughout Alta California were divided and granted to prominent citizens in the territory. Between 1838 and 1846, several large private ranchos were created in and around the Chino Basin, including Santa Ana del Chino, Cucamonga, Jurupa, La Sierra (Sepulveda), La Sierra (Yorba), El Rincon, and San José.

During the 1830s-1850s, the grantees and subsequent owners of some of these ranchos became the first non-natives to settle in or near the planning area. Among them were Ygnacio Palomares and Ricardo Vejar in present-day Pomona, Tiburcio Tapía in Rancho Cucamonga, Juan Bandini in Norco-Eastvale, Raimundo Yorba in the Prado Basin, and Isaac Williams in Chino. As elsewhere in Southern California during the Rancho Period, cattle raising was the most prevalent economic activity on these ranchos until the influx of American settlers eventually brought an end to this now-romanticized lifestyle during the second half of the 19th century.

In the 1880s, spurred by the completion of the competing Southern Pacific and Santa Fe railways, a land boom swept through much of Southern California. A large number of towns, surrounded by irrigated agricultural land, were laid out in the inland valleys before the end of the 19th century, including many in the planning area. For the rest of the 19th century and much of the 20th, the inland region remained rural in character, with agriculture as its main livelihood. After the successful introduction of the navel orange in the mid-1870s, the Chino Basin area became an important part of Southern California's prosperous citrus industry.

As the area was gradually settled and developed, the different communities acquired distinctive economic and social characteristics. For example, Chino became known as the dairy capital of Southern California, the present-day Rancho Cucamonga area established an identity through vineyard cultivation and winemaking, while Fontana earned a distinction for poultry, hog, and rabbit raising. Nevertheless, as in other parts of the Inland Empire, citrus cultivation remained the most important agricultural pursuit in the Chino Basin through the rest of the historic period. In 1888 and 1891, respectively, Pomona and Ontario became the first incorporated cities in the planning area.

By the mid-20th century, the forces of industrialization and urbanization began to alter the cultural landscape in the area, a change particularly well-illustrated by the establishment of the Kaiser Steel Mill in Fontana in the early 1940s. After the end of the Second World War, rapid urban expansion in the Los Angeles Basin spurred an exodus of displaced dairy farmers to the southern portion of the planning area, which contributed greatly to the establishment of milk as the leading agricultural product in both San Bernardino and Riverside Counties. In recognition of the importance of its agricultural economy, the County of San Bernardino officially designated this dairy-dominated area as an agricultural reserve.

Starting in the 1990s, however, the Chino Basin agricultural reserve was incrementally dismantled, losing the majority of its dairies and other agricultural enterprises to the ever-increasing demand for affordable housing. As elsewhere in Southern California, residential and associated commercial developments have now assumed a dominant role in regional growth. As

a result, the cities and communities in the planning area have essentially merged into one metropolitan area over the past few decades.

4.6.3 Sensitivity Assessment

4.6.3.1 Historical/Archaeological Resources

As a part of the cultural resource investigations for the DPEIR, existing records at the appropriate repositories were consulted to identify relative concentrations of known cultural resources within the planning area. Known cultural resources are those that have been previously identified through inclusion in one or more of the following inventories: National Register of Historic Places, California Register of Historical Resources, California Historical Landmarks, California Points of Historic Interest, California Historical Resources Inventory, and the various local registers.

For the planning area, this information is maintained at the South Central Coastal Information Center (SCCIC) and the Eastern Information Center (EIC) branches of the California Historical Resources Information System. Located on the campuses of California State University, Fullerton, and University of California, Riverside, SCCIC and EIC are the official cultural resource records repositories for the Counties of Los Angeles and San Bernardino and for the County of Riverside, respectively.

Records searches at SCCIC and EIC indicate that roughly half of the planning area has been surveyed in the past for cultural resources and that most of these studies were concentrated in areas where urban/suburban development activities accelerated after environmental regulations were implemented in the 1970s or along major transportation corridors and other linear features of infrastructure, such as power transmission lines.

As a result of these studies, approximately 60 sites and 40 isolates—localities with fewer than three artifacts—of prehistoric origin have been reported to SCCIC and EIC, along with several hundred built-environment features, archaeological sites, and isolates of historical origin. Representing the cumulative findings of the past studies, the spatial distribution of these known cultural resources provides some insight for assessing the potential for similar resources to be present in the vicinity and helps identify areas of heightened sensitivity.

Prehistoric Archaeological Resources

The records search results show that the almost all of the prehistoric sites and isolates previously identified within the planning area occur in relatively concentrated clusters near sheltered areas near the base of hills or on elevated terraces, hills, and finger ridges near reliable sources of water. This distribution pattern is corroborated by the ethnographic literature that identifies such settings as the preferred settlement environment among Native Americans of the Inland Empire region. The presence of these known prehistoric sites and isolates suggest a heightened probability for similar cultural remains to be encountered in subsurface deposits at these locations. Areas that have not been surveyed, but where sites can be reasonably expected to be found typically include those on terraces or in foothills overlooking any streams or springs. Within the planning area, the areas of heightened sensitivity includes the relatively undeveloped areas along the bases of the San Gabriel, San Bernardino, and Jurupa mountains and the Chino Hills near the Prado Basin, in the upper reaches of the mountain creeks (such as San Antonio Creek, Cucamonga/Day Creek, and San Sevaine Creek), and along the Santa Ana River.

The level, unprotected valley floor of the Chino Basin was likely used mainly for resource procurement, travel, and occasional camping during these activities. Without any reliable water sources within easy reach, most of the valley floor would not have offered a favorable setting for long-term settlement in prehistoric times. Furthermore, these areas have been subject to extensive and sometimes repeated development activities over the past 150 years, especially since the mid-20th century, and the ground surface has been heavily disturbed, thus reducing the sensitivity for subsurface cultural remains from the prehistoric period.

In summary, the geomorphologic setting and the extent of past ground disturbances suggest that most of the valley floor at lower elevations in the planning area is unlikely to contain potentially significant archaeological deposits of prehistoric origin. Existing archaeological records at SCCIC and EIC appear to support this overall sensitivity assessment.

Historic-Period Archaeological Resources and Built-Environment Features

Records at SCCIC and EIC demonstrate that throughout the planning area there is significant potential for encountering historic-period cultural resources dating at least to the late 19th century, and in some cases as early as the 1830s. Not surprisingly, known historic-period sites are noticeably concentrated around early settlements, such as the downtown areas of the various communities, and along major transportation routes. The distribution complements the demonstrated pattern of development over the past 200 years, as demonstrated by the shifting land uses discussed above and by historical maps and aerial photographs of the Chino Basin area.

The older urban cores of the communities in the planning area, therefore, generally demonstrate higher levels of sensitivity than large tracts of formerly rural land used in agriculture and dairy production, such as those being increasingly developed into suburban residential neighborhoods, warehouse complexes, and shopping centers in recent decades. Common sites to be expected include essentially all types of buildings and structures from the late 19th and to the mid-20th centuries, structural remains, historic landscapes, refuse deposits, irrigation works, and other infrastructure features such as power transmission lines, roads, and railroads.

While most of the roads in the older neighborhoods are now more than 50 years old, typically they are unlikely to be considered historically significant due to the lack of integrity resulting from modern upgrading and maintenance. Some of the roads, however, deserve special attention in this respect in light of their unique historic association and design character, such as Euclid Avenue, Foothill Boulevard (formerly U.S. Route 66), Valley Boulevard (formerly U.S. Route 70/99), Mission Boulevard (formerly U.S. Route 60), and Baseline Road/Avenue, which is notable more as the physical representation of the San Bernardino Baseline than for the road itself.

4.6.3.2 Paleontological Resources

A recent map showing the surface geology in the planning area is presented in **Figure 4.6-1**. On the map, the bright, multi-colored areas to the north, west, and southeast represent the nearby mountains and hills. The geologic formations in those areas generally consist of granitic and other intrusive crystalline rocks of all ages or Cretaceous and Pre-Cretaceous metamorphic formations of sedimentary and volcanic origin, which have a low sensitivity of containing paleontological resources. The dark brown areas in the planning areas (**Figure 4.6-1**) indicate the presence of artificial fill soil on the surface, which also has a low sensitivity for paleontological resources. Additionally, sediments within the Santa Ana River channel and its flood plain, consisting of young and very young wash deposits, are very low in sensitivity. Any paleontological

resources that may be found in these sediments would have been transported from some other location and, as such, would not have any contextual integrity.

The vast majority of the planning area is covered by Young Alluvial Fan Deposits (the grayish *Qyf3* and *Qyf3a* and the yellowish *Qyf1*, *Qyf4*, *Qyf5*, *Qf*, and *Qf2* in **Figure 4.6-1**) and Young aeolian deposits (the greenish-yellow *Qye*). The aeolian, or wind-blown, deposits are not likely to contain any significant paleontological resources. The Young Alluvial Fan Deposits may date from the Late Pleistocene to the Early Holocene. The younger, Holocene sediments (less than 11,700 years old) in this geologic unit are generally present on the surface, and are not old enough to contain significant paleontological resources. The thickness of this Holocene alluvium is expected to vary significantly in different parts of the planning area, and older, paleontologically sensitive Pleistocene alluvium may underly these younger surficial sediments. Excavations in these soils, therefore, may reach the paleontologically sensitive soils below the recent alluvium and impact significant paleontological resources.

There are a few small areas in the planning area where Very Old Alluvial Fan Deposits, dating to the Early Pleistocene Epoch, are present on the surface. These sediments typically have a high potential to contain nonrenewable paleontological resources and are considered to be highly sensitive for paleontological resources. Similar deposits elsewhere in Southern California have yielded scientifically significant fossils of plants and animals from the Pleistocene Epoch, including mammoths, mastodons, ground sloths, dire wolves, short-faced bears, saber-toothed cats, horses, camels, and bison. Consequently, the potential of finding vertebrate fossils where Pleistocene-age alluvial sediments are encountered is moderate to high. Based on the mapped surface geology and/or previous fossil finds, conditions favorable for fossil preservation occur within the planning area at the following five locations:

- A small area near the Rancho Cucamonga Creek, north of Foothill Boulevard ($Qvof_1$).
- Close to the Santa Ana River, southwest of Van Buren Boulevard and the Jurupa Mountains (Qoa_a, *Qof*, Qof_{1a}, $Qvoa_a$, Qvo_{3a}, and $Qvof_a$).
- Non-igneous portions of the Jurupa Mountains, specifically two areas on the north side ($Qvof_1$ and $Qvof_3$).
- In Chino Hills, north of Chino Hills Parkway and west of State Route 71 ($Qvof_a$).
- Areas in and around the Prado Basin, generally east of State Route 71, west of Hellman Avenue, north of the Santa Ana River, and south of Merrill Avenue. This large area of older alluvium from the Pleistocene Epoch ($Qvof_a$, Qvo_a, and *Qvof*) is assigned high paleontological sensitivity beginning at the surface, particularly on the terraces adjacent to the Prado Dam and the non-ponded areas behind the dam. During previous studies, the Natural History Museum of Los Angeles County (NHMLAC) and the San Bernardino County Museum (SBCM) identified a fossil vertebrate locality from sediment lithologies similar to those that may occur as subsurface deposits at this location. Both museums consider the Prado Dam area to be of high paleontological sensitivity.

4.6.4 Regulatory Setting

The cultural resources component of this DPEIR is prepared to address planned recycled water management activities in the Chino Basin to support the CBP, including construction of new put and take water facilities and associated structures, pipeline installation, and other earth-moving operations. The location of potential projects range between well-defined (RP-4) to relatively uncertain at this time, but the various components will occur in commercial, industrial, and residential areas in the communities within the project area.

Activities requiring excavation or movement of soil material at any location within the CBP Infrastructure area have potential to adversely affect cultural resources. In most cases, however, pipelines will be installed along existing roadways and public rights-of-way where development has already occurred, thus the chances of uncovering previously unidentified cultural resources are diminished. During well construction, the chances of encountering cultural resources are greater than along existing roadways, but the actual potential of discovery at each location is substantially different and highly site-specific.

The impact assessment presented below focuses on physical changes to the landscape at a project site and any potential adverse impacts these changes may have on any historical, archeological, or paleontological resources that exist at the site. For purposes of the impacts, it is assumed that all projects will be approved and implemented as proposed and described in the Project Description in this document.

4.6.4.1 Federal

National Historic Preservation Act

Cultural resources are protected through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code (U.S.C.) § 300101 et seq.), and the implementing regulations, Protection of Historic Properties (36 Code of Federal Regulations (CFR) Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), the NHPA (54 U.S.C. § 306108) requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer (SHPO) a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register of Historic Places (NRHP). Under the NHPA, properties of traditional religious and cultural importance to a Tribe are eligible for inclusion in the NRHP (54 U.S.C. §302706). Also, under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR Section § 60.4.

National Register of Historic Places

The National Register of Historic Places (National Register) was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR § 60.2). The National Register recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. In the context of the project, which does not involve any historical-period structures, the following National Register criteria are given as the basis for evaluating archaeological resources.

To be eligible for listing in the National Register, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (U.S. Department of the Interior, 1995):

- Are associated with events that have made a significant contribution to the broad patterns of our history;
- Are associated with the lives of persons significant in our past;
- Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

- Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least fifty years old to be eligible for National Register listing (U.S. Department of the Interior, 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (U.S. Department of the Interior, 1995). The National Register recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

4.6.4.2 State

The State implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdictions.

California Register of Historical Resources
The California Register of Historical Resources (California Register) is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change." (California Public Resources Code § 5024.1(a)). The criteria for eligibility for the California Register are based upon National Register criteria (California Public Resources Code § 5024.1(b)). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

- To be eligible for the California Register, a prehistoric or historical-period property must be significant at the local, State, and/or federal level under one or more of the following criteria:
- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (Those properties identified as eligible for listing in the National Register of Historic Places, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Historic Landmarks

California Historical Landmarks (CHLs) are buildings, structures, sites, or places that have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value and that have been determined to have statewide historical significance by meeting at least one of the criteria listed below. The resource also must be approved for designation by the County Board of Supervisors (or the city or town council in whose jurisdiction it is located); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks. The specific standards now in use were first applied in the designation of CHL #770. CHLs #770 and above are automatically listed in the CRHR.

To be eligible for designation as a landmark, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);
- It is associated with an individual or group having a profound influence on the history of California; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer, or master builder.

California Points of Historical Interest

California Points of Historical Interest (PHI) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. PHI designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the CRHR. No historic resource may be designated as both a landmark and a point. If a point is later granted status as a landmark, the point designation will be retired. In practice, the point designation program is most often used in localities that do not have a locally enacted cultural heritage or preservation ordinance.

To be eligible for designation as a PHI, a resource must meet at least one of the following criteria:

- It is the first, last, only, or most significant of its type within the local geographic region (city or county);
- It is associated with an individual or group having a profound influence on the history of the local area; or
- It is a prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

California Environmental Quality Act

Under CEQA (Public Resources Code (PRC) Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. State CEQA Guidelines Section 15064.5 defines a historical resource as: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

As described by PRC Section 21084.1 and Section 15064.4 of the State CEQA Guidelines, should a project cause a substantial adverse change (defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired) in the significance of an historical resource, the lead agency must identify potentially feasible measures to mitigate these effects (State CEQA Guidelines § 15064.4(b)(1) & (4)).

Archaeological resources are defined in PRC Section 21083.2, subdivision (g) of which states that a "unique archaeological resource" is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Unique archaeological resources may require reasonable efforts to preserve resources in place (PRC § 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required. Additionally, the State CEQA Guidelines state that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (State CEQA Guidelines § 15064.4(c)(4)).

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires, in the event human remains are discovered, that all ground disturbances must cease and the County Coroner must be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin by the Coroner, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Paleontological Resources

Section 5097.5 of the PRC specifies that any unauthorized removal of paleontological remains is a misdemeanor. Further, the California Penal Code Section 622.5 sets the penalties for the damage or removal of paleontological resources.

4.6.5 Thresholds of Significance

4.6.5.1 Historic and Archaeological Resources

CEQA establishes that a project that may cause a substantial adverse change in the significance of a “historical resource” or a “tribal cultural resource” is a project that may have a significant effect on the environment (PRC § 21084.1 & § 21804.2). Similarly, CEQA guidelines (Title 14 CCR App. G, Sec. V(c)) require that public agencies in the State of California determine whether a proposed project would “directly or indirectly destroy a unique paleontological resource” during the environmental review process.

According to PRC Section 5020.1(j), “historical resource” includes, but is not limited to, any object, building, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." More specifically, CEQA guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources, included in a local register of historical resources, or determined to be historically significant by the Lead Agency (State CEQA Guidelines § 15064.4(a)(1)-(3)).

Regarding the proper criteria of historical significance, CEQA guidelines mandate that "a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing on the California Register of Historical Resources" (State CEQA Guidelines §15064.4(a)(3)). A resource may be listed in the California Register if it meets any of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
(2) Is associated with the lives of persons important in our past.
(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
(4) Has yielded, or may be likely to yield, information important in prehistory or history. (PRC § 5024.1(c))

4.6.5.2 Significance Thresholds

The thresholds analyzed in this section are derived from Appendix G of the CEQA Guidelines, and are used to determine the level of potential effect. The significance determination is based on the recommended criteria set forth in Section 15064.4 of the CEQA Guidelines. For analysis purposes, implementation of the CBP would have a significant effect on cultural resources if it is determined that the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.4.?
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.4.?
c) Disturb any human remains, including those interred outside of formal cemeteries.

4.6.6 Potential Impacts

The following issues from Appendix G of the CEQA Guidelines will be addressed for potential significance of cultural resource effects:

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in 15064.4.?

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.4.?

Based on the sensitivity assessment presented in the sections above, implementation of specific projects in the planning area could encounter historical, archaeological, and paleontological resource and cause a significant impact on them. All future CBP Infrastructure projects that may impact historical or archaeological resources in the planning area shall be subject to focused studies that cover the entire area of potential effects for each project, including any significant indirect effects. As dictated by the findings above, multiple phases of studies may be necessary to properly identify and evaluate potential cultural resources, mitigate project effects on any significant resources, and protect buried archaeological or paleontological remains against inadvertent disturbances. The analysis below also includes a site-specific evaluation of RP-4 to determine whether any potential for cultural and paleontological resources impacts exist at this site.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Since the proposed project is at the programmatic level, specific locations for the proposed wells have yet to be determined. As such, forecasting impacts to specific historical, archaeological, and paleontological resources would be speculative. Previously unknown and unrecorded cultural resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique buried archaeological or paleontological resources are uncovered during excavation or construction without mitigation, significant impacts could occur. Therefore, as project locations are determined and finalized, site-specific studies to identify potentially significant historical, archaeological, and paleontological resources would be required, such as Phase I Cultural Resources Investigations. Additional studies would minimize potential impacts to historical, archaeological, and paleontological resources.

Where a future CBP Infrastructure project is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as an existing well site or water treatment facility site), IEUA may not be required to complete a follow-on cultural resources report (Phase I Cultural Resources Investigation). However, measures below address the requirement that future CBP Infrastructure projects within existing facilities that have been totally disturbed that require state funding must complete a Phase I Cultural Resources Investigation because the state requires such studies to be completed in order to be eligible for state funding, such as CWSRF funds.

Future CBP Infrastructure projects that are located within undisturbed areas will require a follow-on Phase I Cultural Resources Investigation. Further mitigation measures are provided below that address the potential for multiple phases of studies that may be necessary to properly identify and evaluate potential cultural resources for a given CBP project.

In light of the possibility for the involvement of federal funding or permits, it is anticipated that many future projects will require consultation with—and concurrence from—SHPO regarding the adequacy of research procedures implemented during project-specific cultural resources studies and the appropriateness of the findings and conclusions under Section 106 of the National Historic Preservation Act. Given the extended timeframe of CBP and the large number of projects it will entail, IEUA will explore, through mitigation provided below, collectively establishing a programmatic agreement with SHPO to stipulate a set of mutually accepted guidelines on research procedures and the types of potential cultural resources that may be excluded from further consideration before CBP Infrastructure projects are implemented.

It can be anticipated that projects proposed under the CBP may involve modifications to or may otherwise encounter common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. The aforementioned programmatic agreement would outline the proper treatment of such properties in future project-specific studies, which will greatly streamline the design and

completion of such studies, facilitate the SHPO review process, and minimize potential project delays.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category describes an expansion of the maximum storage space (safe storage capacity) to be established within the Chino Basin from its current maximum (700,000 AF through June 30, 2030 and 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039 and to 580,000 AF from July 1 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity in support of the CBP project would not result in any visible above ground impacts beyond those infrastructure facilities associated with CBP implementation outlined under Project Categories 1 and 2 as previously described. As such, no historical or archaeological resources would be impacted by implementing the increase in safe storage capacity.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

An evaluation of cultural resource sensitivity at RP-4 is presented in this section. CRM TECH has provided a Memorandum on their Cultural Resources Survey for the Proposed AWPF at RP-4; this report has been provided as Appendix 7 to Volume 2 of this DPEIR. The project area was partially included in the areas surveyed for cultural resources during two previous studies that CRM TECH conducted for IEUA in 2002 and 2006 (Tang and Smallwood 2002; Encarnación et al. 2006). Both of those studies were standard Phase I cultural resources surveys completed under provisions of Section 106 of the National Historic Preservation Act. The scopes of these studies included cultural resources records searches in the California Historical Resources Information System, historical background research, consultations with Native American representatives, and intensive-level field surveys, and neither of them encountered any cultural resources. CRM TECH surveyed RP-4 to confirm that the project will not cause a substantial adverse change in the significance of any "historical resources," as defined by CEQA (PRC §5020.1(j); Title 14 CCR §15064.5(a)(1)-(3)), especially those that may have become historical in age (i.e., more than 50 years old) since 2006. Throughout the course of the survey, no buildings, structures, objects, sites, features, or artifacts of prehistoric or historical origin were encountered within or adjacent to the project area. Therefore, CRM TECH recommends to the IEUA a finding of No Impact regarding "historical resources." No further cultural resources investigation is recommended for the project unless construction plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are discovered during earth-moving operations associated with the project, all work in that area should be halted or diverted

until a qualified archaeologist can evaluate the nature and significance of the finds. As such, MM **CUL-1** below must be implemented to ensure impacts would be less than significant.

The CBP project also envisions the installation of up to 3 wellhead treatment facilities. Like the projects listed under Project Category 1 and Category 2, when these sites are identified they will have to be evaluated for cultural and paleontological resource presence and mitigation may need to be implemented. Thus, for Project Category 4 wellhead treatment facilities impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

CUL-1: ***Where a future discretionary project requiring additional CEQA review is proposed within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site or water treatment facility site), the agency implementing the CBP project will not be required to complete a follow on cultural resources report (Phase I Cultural Resources Investigation) unless IEUA is seeking additional State or federal funding, in which case IEUA shall prepare a Phase I Cultural Resources Investigation to satisfy State CEQA-plus or federal agency requirements.***

Where a Phase I Cultural Resources Investigation is not required or has already been completed (such as at RP-4), the following shall be required to minimize impacts to any accidentally exposed cultural resource materials:

- ***Should any subsurface cultural resources be encountered during construction of these facilities, earthmoving or grading activities in the immediate area of the finds shall be halted and an onsite inspection shall be performed immediately by a qualified archaeologist meeting the Secretary of Interior Standards for Archaeology. Responsibility for making this determination shall be with IEUA's trained onsite inspector. An archaeological professional shall assess the find, determine its significance, and make recommendations for appropriate mitigation measures in accordance with the State CEQA Guidelines.***

CUL-2: ***Where a future discretionary project requiring additional CEQA review is proposed within an undisturbed site and/or a site that will require substantial earthmoving activities and/or excavation, and/or IEUA is seeking State or federal funding, IEUA shall complete a follow-on cultural resources report (Phase I Cultural Resources Investigation) regardless of whether IEUA is seeking State or federal funding.***

Where a Phase I Cultural Resources Investigation is required, the following phases of identification, evaluation, mitigation, and monitoring shall be followed for a given CBP Infrastructure facility:

1. ***Phase I (Identification): A Phase I Investigation to identify historical, archaeological, or paleontological resources in a project site shall include the following research procedures, as appropriate:***
   - ***Focused historical/archaeological resources records searches at SCCIC and/or EIC, depending on the project location, and paleontological resources records searches by NHMLAC, SBCM, and/or the Western Science Center in Hemet;***
   - ***Historical background research, geoarchaeological profile analysis, and paleontological literature review;***

- ***Consultation with the State of California Native American Heritage Commission, Native American tribes in the surrounding area in accordance with AB52, pertinent local government agencies, and local historic preservation groups;***
- ***Field survey of the project area by qualified professionals of the pertinent discipline and at the appropriate level of intensity as determined on the basis of sensitivity assessment and site conditions;***
- ***Field recordation of any cultural resources encountered during the survey and proper documentation of the resources for incorporation into the appropriate inventories or databases.***

2. ***Phase II (Evaluation): If cultural resources are encountered in a project site and cannot be avoided, a Phase II investigation shall be required to evaluate the potential significance of the resources in accordance with the statutory/regulatory framework outlined above. A typical Phase II study consists of the following research procedures:***
   - ***Preparation of a research design to discuss the specific goals and objectives of the study in the context of important scientific questions that may be addressed with the findings and the significance criteria to be used for the evaluation, and to formulate the proper methodology to accomplish such goals;***
   - ***In-depth exploration of historical, archaeological, or paleontological literature, archival records, as well as oral historical accounts for information pertaining to the cultural resources under evaluation;***
   - ***Fieldwork to ascertain the nature and extent of the archaeological/paleontological remains or resource-sensitive sediments identified during the Phase I study, such as surface collection of artifacts, controlled excavation of units, trenches, and/or shovel test pits, and collection of soil samples;***
   - ***Laboratory processing and analyses of the cultural artifacts, fossil specimens, and/or soil samples for the proper recovery, identification, recordation, and cataloguing of the materials collected during the fieldwork and to prepare the assemblage for permanent curation, if warranted.***
3. ***Phase III (Mitigation/Data Recovery): For resources that prove to be significant under the appropriate criteria, mitigation of potential project impact is required. The first option is avoidance by selecting and implementing a CBP Infrastructure facility at an alternative site without significant cultural or paleontological resources. Depending on the characteristics of each resource type and the unique aspects of significance for each individual resource, mitigation may be accomplished through a variety of different methods, which shall be determined by a qualified archaeologist, paleontologist, historian, or other applicable professional in the "cultural resources" field. Typical mitigation for historical, archaeological, or paleontological resources, however, may focus on the following procedures, aimed mainly at the preservation of physical and/or archival data about a significant cultural resource that would be impacted by the project:***
   - ***Data recovery through further excavation at an archaeological site or a paleontological locality to collect a representative sample of the identified remains, followed by laboratory processing and analysis as well as preparation for permanent curation;***
   - ***Comprehensive documentation of architectural and historical data about a significant building, structure, or object using methods comparable to the appropriate level of the Historic American Buildings Survey (HABS) and the Historic American Engineering Record (HAER) for permanent curation at a repository or repositories that provides access to the public;***
   - ***Adjustments to project plans to minimize potential impact on the significance and integrity of the resource(s) in question.***
4. ***Phase IV (Monitoring): At locations that are considered sensitive for subsurface deposits of undetected archaeological or paleontological remains, all earth-moving operations shall be monitored continuously or periodically, as warranted, by qualified***

professional practitioners. Archaeological monitoring programs shall be coordinated with the nearest Native American groups, who may wish to participate, as put forth in mitigation measures TCR-1 through TCR-3.

CUL-3: After each phase of the studies required by mitigation measure CUL-2 has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures shall be prepared and submitted to South Central Coastal Information Center (SCCIC), Eastern Information Center (EIC), Natural History Museum of Los Angeles County (NHMLAC), and/or San Bernardino County Museum (SBCM), as appropriate and in addition to IEUA for the project, for permanent documentation and easy references by future researchers.

CUL-4: Prior to commencement of construction of CBP Infrastructure facilities (excluding those facilities that have undergone site specific Cultural Resources Investigations, such as at RP-4), IEUA shall confer with the CBP project stakeholders to establish a programmatic agreement with SHPO that will stipulate a set of mutually accepted guidelines that address research procedures and the types of potential cultural resources that may be excluded from further consideration before CBP Infrastructure facilities are implemented, such as common infrastructure features that are more than 50 years of age, but have a low potential to be considered historically significant, such as existing roadways and minor, utilitarian structures serving as pumphouses or reservoirs, as well as numerous historic-period buildings that are adjacent to the project boundaries but are unlikely to receive any direct or indirect impact. Once this agreement has been made with SHPO, IEUA shall retain the agreement in the Project file, and shall ensure that any CBP partner agencies are given copies of the agreement for reference on future CBP Infrastructure facilities. For CBP projects that are in development prior to an agreement with SHPO, all types of cultural resources shall be considered by the professionals assessing historical resources within the project footprint; regardless, the steps provided in mitigation measure CUL-2 shall be followed to assess and minimize impacts to sensitive cultural resources within a given site.

Level of Significance After Mitigation: Less Than Significant

Mitigation Measure (MM) **CUL-1** would exclude highly disturbed sites from requiring further cultural resource evaluation, unless IEUA is seeking additional state funding or federal funding for the project. Furthermore, MM **CUL-1** would require IEUA to adhere to adaptive management procedures pertaining to treatment of cultural resources that may be accidentally discovered during earthmoving activities.

MM **CUL-2** would ensure that future CBP Infrastructure facilities that are located within undisturbed areas, within a site that will require substantial earthmoving activities and/or excavation, and/or IEUA is seeking State funding, will require a follow-on Phase I Cultural Resources Investigation. This mitigation measure includes several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located. This would ensure that adequate mitigation is provided in the event that significant cultural resources are located within a given CBP Infrastructure project site.

MM **CUL-3** would ensure that, after each phase of the studies required by MM **CUL-2** has been completed, where required, a complete report on the methods, results, and final conclusions of the research procedures is prepared and submitted to SCCIC, EIC, NHMLAC, and/or SBCM. This would ensure that any discoveries are properly documented for future researchers that may seek information regarding the CBP Infrastructure project site.

Finally, MM **CUL-4** would set a precedent for future CBP Infrastructure facilities that would streamline the design and completion of future Phase I Cultural Resources Investigations. This precedent would stipulate beforehand a set of mutually accepted guidelines on research procedures and the types of potential cultural resources that may be excluded from further consideration. This programmatic agreement would ease future collaborations with SHPO for CBP Infrastructure projects, thereby ensuring resources are properly treated and ensuring efficiency for future CBP Infrastructure development.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As the IEUA service area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains many historical, archaeological, and paleontological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resource sites resulting in a significant cumulative impact.

The potential construction impacts of the CBP Infrastructure project, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact to specific historical, archaeological, and paleontological resources if encountered during project construction. However, implementation of MMs **CUL-1** through **CUL-4** would minimize the contributions of CBP Infrastructure projects to this significant cumulative impact, and the project's contribution would not be cumulatively considerable.

Level of Significance After Mitigation: Less Than Significant

c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

Combined Project Categories

Since the proposed project is at the programmatic level, specific project locations and design elements (other than RP-4) have yet to be finalized for a majority of the CBP Infrastructure projects. Given the large size of the Chino Basin, there is a potential that a given CBP project site could be located in a sensitive area. As such, in the event that human remains are inadvertently discovered during project construction activities, the human remains could be inadvertently damaged, which could result in a significant impact. Implementation of the proposed project would comply with provisions of state law regarding discovery of human remains, including PRC Section 5097.98 and Health and Safety Code Section 7050.5, and if human remains are accidentally exposed during site grading, Section 7050.5 requires a contractor to immediately stop work in the vicinity of the discovery and notify the County Coroner. The Coroner must then determine whether the remains are human and if such remains are human, the Coroner must determine whether the remains are or appear to be of a Native American origin. If deemed potential Native American remains, the Coroner contacts the NAHC to identify the most likely affected tribe and/or most likely descendant (MLD). Until the landowner has conferred with the MLD, IEUA shall ensure that the immediate vicinity where the discovery occurred is not disturbed by further activity, is adequately protected according to generally accepted cultural or archaeological standards or practices, and that further activities consider the possibility of multiple burials. Since this process

is mandatory, no additional mitigation is required to ensure that the impacts to human remains will be treated with dignity and result in a less than significant impact.

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Less Than Significant

The Chino Basin area is largely urbanized with residential, commercial, and industrial development, though many areas still exist that have not historically been disturbed at depth, such as agricultural sites. As the area continues to develop, it is possible, but unlikely, that construction activities could impact unknown human remains. However, since the treatment of human resources is governed by PRC Section 5097.98 and Health and Safety Code Section 7050.5, the cumulative potential to impact human remains would be less than significant. Therefore, the implementation of the project would not result in a considerable contribution to cumulative impacts on human remains.

Level of Significance After Mitigation: Less Than Significant

4.4.7 Unavoidable Adverse Impacts

Based on the information presented above, all potential cultural resource impacts would be avoided or otherwise limited, and the preceding forecast demonstrates that impacts can be mitigated to a less than significant impact level. As a result, there will not be any unavoidable project specific or cumulative adverse impacts to cultural resources, as broadly defined in this Subchapter, from implementing the project as proposed, and the project's potential impacts on cultural resource impacts will be less than significant.

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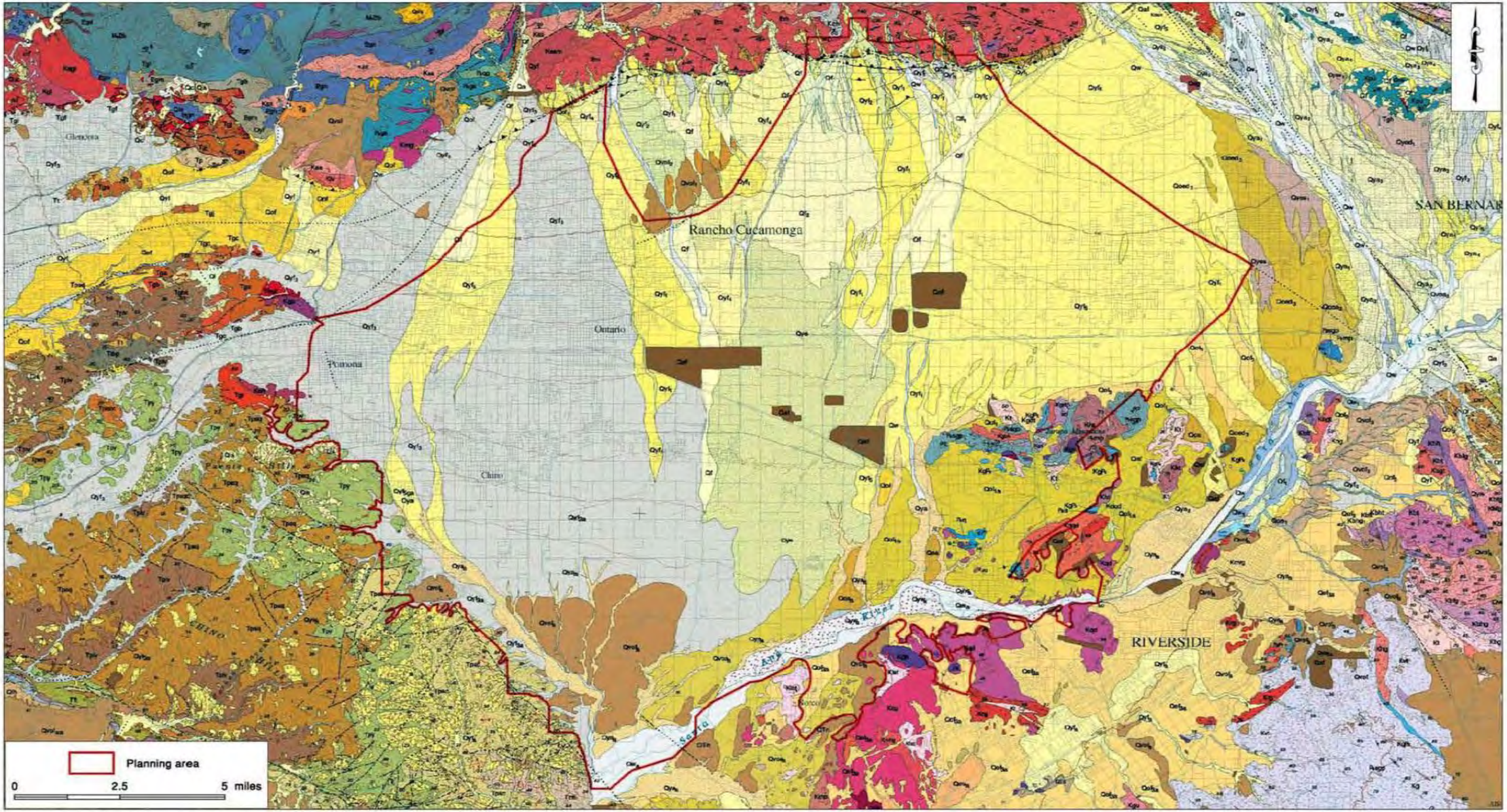

Figure 1. Surface geology in the planning area. Source: D.M. Morton and F.K. Miller: Geologic Map of the San Bernardino and Santa Ana 30'x 60' Quadrangles, California (U.S. Geological Survey 2006).

FIGURE 4.6-1

Tom Dodson & Associates
Environmental Consultants

Surface Geology in the Planning Area

4.7 ENERGY

4.7.1 Introduction

This section assesses potential energy impacts from implementation of the Chino Basin Program (CBP). The *Inland Empire Utilities Agency Chino Basin Program Energy Resources Technical Report* dated October 2021 was prepared by Woodard & Curran to evaluate the potential energy impacts associated with construction and operation of the facilities proposed as part of the CBP. A copy of the Energy Resources Technical Report is provided as Appendix 8 of Volume 2 to this DPEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Energy
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

The following references were used in preparing this Subchapter of the EIR:

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No comments pertaining to energy were received in response to the Notice of Preparation. No comments pertaining to noise were received at the Scoping Meeting held on behalf of the project.

4.7.2 Environmental Setting: Energy

Projects may result in significant environmental effects due to wasteful, inefficient, or unnecessary consumption of energy or the wasteful use of energy resources (*CEQA Guidelines* Section 15126.2[b]). As stated in Appendix F of the CEQA Guidelines, "the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include (1) decreasing overall per capita energy consumption, (2) decreasing reliance on fossil fuels such as coal, natural gas and oil, and (3) increasing reliance on renewable energy sources." Energy use relates directly to environmental quality because energy use can generate air pollutant emissions that adversely affect air quality and can generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to power residences and businesses, heat and cool buildings, and power vehicles. Transportation energy use is dependent on the fuel efficiency of cars, trucks, and public transportation; the different travel modes such as auto, carpool, public transit, and biking/walking; and the miles traveled using each of these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

4.7.2.1 Energy Supply

Petroleum

California is one of the top producers of petroleum in the nation with drilling operations occurring throughout the State but concentrated primarily in Kern and Los Angeles Counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San

Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area.[1] According to the United States Energy Information Administration, California's field production of crude oil totaled 133.1 million barrels in 2020.[2]

Petroleum Infrastructure in the Chino Basin

There are dozens of gas stations and one petroleum product terminal in the Chino Basin.[3, 4] According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, there are several idle and plugged oil and gas wells located through the Chino Basin as well as multiple plugged dry hole oil and gas wells.[5, 6]

Alternative Fuel Infrastructure in the Chino Basin

A variety of alternative fuels are used to reduce petroleum-based fuel demand. Their use is encouraged through various statewide and local regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill (SB) 32. Alternative vehicle fuels include hydrogen, biodiesel, and electricity. Currently, 42 hydrogen and 10 biodiesel refueling stations are located in California; of these, one biodiesel refueling station is located in the Chino Basin. There are also dozens of publicly available electric vehicle charging stations in the Chino Basin.[7]

Electricity

In 2020, California's in-State electricity generation totaled 190,922 megawatts.[8] Primary fuel sources for the State's electricity generation in 2020 included natural gas, hydroelectric, solar photovoltaic, wind, nuclear, geothermal, biomass, and solar thermal. According to the 2019 Integrated Energy Policy Report, California's electric grid relies increasingly on renewable energy sources, and by 2025, the use of electricity sourced from out-of-State coal generation will be eliminated. As this transition advances, the grid is also expanding to serve additional loads produced by building and vehicle electrification, among other factors. California produces more renewable energy than any other State in the United States with 23,313 megawatts of installed renewable capacity.[9, 10]

[1] California Energy Commission (CEC). 2021. "Oil Supply Sources to California Refineries." http://www.energy.ca.gov/almanac/petroleum_data/statistics/crude_oil_receipts.html (accessed September 2021).
[2] United States Energy Information Administration (U.S. EIA). 2021. "Petroleum & Other Liquids, California Field Production of Crude Oil." https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPCA1&f=M (accessed September 2021).
[3] GasBuddy. 2021. "Gas Price Map." www.gasbuddy.com (accessed September 2021).
[4] U.S. EIA. 2021. "U.S. Energy Mapping System." https://www.eia.gov/state/maps.php (accessed September 2021).
[5] A dry hole well is an exploratory or development well that was found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well (U.S. EIA. 2021. "Glossary." https://www.eia.gov/tools/glossary/ [accessed October 2021].).
[6] California Department of Conservation Division of Oil, Gas, and Geothermal Resources. 2021. Division of Oil, Gas & Geothermal Resources – Well Finder. https://maps.conservation.ca.gov/doggr/wellfinder/ (accessed September 2021).
[7] United States Department of Energy. 2021. "Alternative Fuels Data Center." https://afdc.energy.gov/stations/#/find/nearest (accessed October 2021).
[8] CEC. 2021. "Electric Generation Capacity & Energy." https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-generation-capacity-and-energy (accessed October 2021).
[9] U.S. EIA. 2021. Table P2. Primary Energy Production Estimates in Trillion Btu, 2018. Last modified: June 25, 2021. https://www.eia.gov/state/seds/sep_prod/pdf/P2.pdf (accessed October 2021).
[10] CEC. 2020. Final 2019 Integrated Energy Policy Report. February 2020. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report (accessed October 2021).

Southern California Edison

Southern California Edison (SCE), whose service area spans a 50,000-square-mile area of central, coastal, and Southern California, supplies electricity to the Chino Basin.[11] SCE maintains 12,635 miles of transmission lines, 91,375 miles of distribution lines, 1,433,336 electric poles, 720,800 distribution transformers, and 2,959 substation transformers.[12] Approximately 35 percent of electricity provided by SCE is supplied from eligible renewable energy resources (i.e., biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind). Other major energy resources include natural gas (16 percent), large hydroelectric (eight percent), and nuclear power (eight percent).

Electric Power Infrastructure in the Chino Basin

There are several natural gas and biomass electric power plants as well as numerous solar photovoltaic systems in the Chino Basin.[13]

Natural Gas

California's net natural gas production for 2019 was 162.1 billion cubic feet.[14] The State relies on out-of-State natural gas imports for nearly 90 percent of its supply. The California Energy Commission (CEC) estimates that approximately 45 percent of the natural gas burned across the State is used for electricity generation, and much of the remainder is consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors. Building and appliance energy efficiency standards account for up to 39 percent in natural gas demand savings between 1975 and 2010.[15]

Southern California Gas Company

Natural gas is provided to the Chino Basin by the Southern California Gas Company (SoCalGas), whose service area spans Southern California.[16] SoCalGas serves approximately 21.8 million customers with approximately 3,526 miles of gas transmission pipelines, 49,715 miles of gas distribution pipelines, and 48,888 miles of service lines.[17] Natural gas supplied by SoCalGas is sourced primarily from several sedimentary basins in the western United States and Canada including New Mexico, West Texas, the Rocky Mountains, western Canada, and California.[18]

Natural Gas Infrastructure in the Chino Basin

According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources, there are several idle and plugged oil and gas wells located throughout the Chino Basin

[11] SCE. 2021. "Our Service Territory." https://www.sce.com/about-us/who-we-are/leadership/our-service-territory (accessed October 2021).
[12] SCE. 2021. "Who We Are." https://www.sce.com/about-us/who-we-are (accessed October 2021).
[13] U.S. EIA. 2021. "U.S. Energy Mapping System." https://www.eia.gov/state/maps.php (accessed September 2021).
[14] California Department of Conservation Division of Oil, Gas, and Geothermal Resources. 2020. 2019 Report of California Oil and Gas Production Statistics. October 2020. https://www.conservation.ca.gov/calgem/pubs_stats/annual_reports/Pages/annual_reports.aspx (accessed October 2021).
[15] CEC. 2021. "Supply and Demand of Natural Gas in California." https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california (accessed October 2021).
[16] SoCalGas. 2021. "Company Profile." https://www.socalgas.com/about-us/company-profile (accessed October 2021).
[17] SoCalGas. 2013. "Southern California Gas Company's Service Territory." December 2013. https://www.socalgas.com/documents/news-room/fact-sheets/ServiceTerritory.pdf (accessed October 2021).
[18] California Gas and Electric Utilities. 2020. *2020 California Gas Report*. https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf (accessed October 2021).

as well as multiple plugged dry hole oil and gas wells.[19, 20] No natural gas processing plants are located in the area.[21] The Chino Basin contains several natural gas transmission lines that primarily run parallel to major roadways, such as Interstate 10, Interstate 15, State Route 210, Foothill Boulevard, and East Mission Boulevard.[22]

4.7.2.2 Energy Demand

The most relevant scale at which recent communitywide energy consumption information for existing development is readily available is the county level. Therefore, existing energy consumption in San Bernardino and Riverside Counties is used herein to characterize existing energy consumption in the Chino Basin, as detailed in the following subsections.

Petroleum

As shown in **Table 4.7-1**, communitywide development in Riverside and San Bernardino Counties consumed an estimated 1,699 million gallons of gasoline and 303 million gallons of diesel fuel in 2018, which was approximately 14 percent of statewide gasoline consumption and approximately 17 percent of statewide diesel fuel consumption.[23] In comparison, the combined population of Riverside and San Bernardino Counties is approximately 12 percent of the population of California.[24] Therefore, per capita gasoline and diesel fuel consumption in Riverside and San Bernardino Counties are higher than the statewide averages.

Table 4.7-1
2020 ANNUAL GASOLINE AND DIESEL CONSUMPTION

Fuel Type	San Bernardino and Riverside Counties (gallons)	California (gallons)	Proportion of Statewide Consumption[1]
Gasoline	1,699,000,000	12,572,000,000	13.5%
Diesel	303,000,000	1,744,000,000	17.4%

[1] For reference, the combined population of Riverside and San Bernardino Counties (4,630,362 persons) is approximately 11.7 percent of the population of California (39,466,855 persons) (California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ [accessed October 2021].).
Source: CEC. 2020. "California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, California Annual Retail Fuel Outlet Report Results (CEC-A15) Spreadsheets." Last modified: August 31, 2020. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting (accessed October 2021).

[19] A dry hole well is an exploratory or development well that was found to be incapable of producing either oil or gas in sufficient quantities to justify completion as an oil or gas well (U.S. EIA 2021c).
[20] California Department of Conservation Division of Oil, Gas, and Geothermal Resources. 2021. Division of Oil, Gas & Geothermal Resources – Well Finder. https://maps.conservation.ca.gov/doggr/wellfinder/ (accessed September 2021).
[21] U.S. EIA. 2021. "U.S. Energy Mapping System." https://www.eia.gov/state/maps.php (accessed September 2021).
[22] SoCalGas. 2021. "Gas Transmission Pipeline Interactive Map." https://www.socalgas.com/stay-safe/pipeline-and-storage-safety/natural-gas-pipeline-map (accessed October 2021).
[23] CEC. 2020. "California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, California Annual Retail Fuel Outlet Report Results (CEC-A15) Spreadsheets." Last modified: August 31, 2020. https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-retail-fuel-outlet-annual-reporting (accessed October 2021).
[24] California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ (accessed October 2021).

Electricity

As shown in **Table 4.7-2**, communitywide development in Riverside and San Bernardino Counties consumed approximately 30,507 gigawatt-hours of electricity in 2019, which was approximately 38 percent of electricity consumption by SCE and approximately 11 percent of statewide electricity consumption.[25] In comparison, the combined population of Riverside and San Bernardino Counties is approximately 12 percent of the population of California.[26] Therefore, per capita electricity consumption in Riverside and San Bernardino Counties is lower than the statewide average.

Table 4.7-2
2019 ELECTRICITY CONSUMPTION

Energy Type	Riverside and San Bernardino Counties (GWh)	Southern California Edison (GWh)	California (GWh)	Proportion of Southern California Edison Consumption[1]	Proportion of Statewide Consumption[1]
Electricity	30,507	80,913	279,402	37.7%	10.9%

GWH = gigawatt-hours
[1] For reference, the combined population of Riverside and San Bernardino Counties (4,630,362 persons) is approximately 11.7 percent of the population of California (39,466,855 persons) (California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ [accessed October 2021].).
Source: CEC. 2021. "California Energy Consumption Database." http://ecdms.energy.ca.gov/ (accessed October 2021).

Natural Gas

As shown in **Table 4.7-3**, communitywide development in Riverside and San Bernardino Counties consumed approximately 1,000 million US therms of natural gas in 2019, which was approximately 18 percent of natural gas consumption by SoCalGas and approximately eight percent of statewide natural gas consumption.[27] In comparison, the population of Riverside and San Bernardino Counties is approximately 12 percent of the population of California.[28] Therefore, per capita natural gas consumption in Riverside and San Bernardino Counties is lower than the statewide average.'

Table 4.7-3
2019 NATURAL GAS CONSUMPTION

Energy Type	Riverside and San Bernardino Counties (millions of US therms)	SoCalGas (millions of US therms)	California (millions of US therms)	Proportion of SoCalGas Consumption[1]	Proportion of Statewide Consumption[1]
Natural Gas	1,000	5,424	13,158	18.4%	7.6%

[1] For reference, the combined population of Riverside and San Bernardino Counties (4,630,362 persons) is approximately 11.7 percent of the population of California (39,466,855 persons) (California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ [accessed October 2021].).
Source: CEC. 2021. "California Energy Consumption Database." http://ecdms.energy.ca.gov/ (accessed October 2021).

[25] CEC. 2021. "California Energy Consumption Database." http://ecdms.energy.ca.gov/ (accessed October 2021).
[26] California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ (accessed October 2021).
[27] CEC. 2021. "California Energy Consumption Database." http://ecdms.energy.ca.gov/ (accessed October 2021).
[28] California Department of Finance. 2021. "E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2021 with 2010 Census Benchmark." http://dof.ca.gov/Forecasting/Demographics/Estimates/E-5/ (accessed October 2021).

4.7.3 Regulatory Setting

The following regulations are applicable to energy.

4.7.3.1 Federal

The following subsections summarize the main Federal and State regulations applicable to energy. Details on other Federal and State energy regulations can be found in Section 3.1 of the Energy Resources Technical Report contained in Appendix 8 of Volume 2 to this DPEIR.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States' dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022
- Reduces the U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020, an increase in fuel economy standards of 40 percent as compared to 2007 levels

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. New development projects are required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA) for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (U.S. EPA) is responsible for administering the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. In 2012, the U.S. EPA and NHTSA established final passenger car and light-duty truck Corporate Average Fuel Economy standards for model years 2017 to 2021, which require a combined average fleet-wide fuel economy of 40.3 to 41.0 miles per gallon in model year 2021.[29]

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the U.S. EPA and NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program, revoking California's authority to set its own GHG emissions standards and zero-emission vehicle mandates in California. On June 29, 2020, Part Two of the SAFE Vehicles Rule became effective, revising Corporate Average Fuel Economy and carbon dioxide emissions standards for model years 2021-2026 passenger cars and trucks such that the standards increase by approximately 1.5 percent each year through model year 2026, as compared to the 2012 standards which required an approximately five percent annual increase.[30]

[29] United States Department of Transportation. 2014. "Corporate Average Fuel Economy (CAFE) Standards." Last modified: August 11, 2014. https://www.transportation.gov/mission/sustainability/corporate-average-fuel-economy-cafe-standards (accessed October 2021).
[30] NHTSA. 2020. "Fact Sheet: SAFE Vehicles Rule." https://www.nhtsa.gov/corporate-average-fuel-economy/safe-fact-sheet (accessed October 2021).

Energy Star Program
Energy Star is a voluntary labeling program introduced by U.S. EPA to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In addition, the U.S. EPA joined with the United States Department of Energy in 1996 to expand the program, which now also includes certifying commercial and industrial buildings as well as homes.[31]

Construction Equipment Fuel Efficiency Standard
The U.S. EPA sets emission standards for construction equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. Emissions requirements for new off-road Tier 4 vehicles were completely phased in at the end of 2015.

4.7.3.2 State

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions
Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires the California Air Resources Board (CARB) to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the U.S. EPA. Pavley I regulated model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emission Vehicle, Zero Emissions Vehicles, and Clean Fuels Outlet programs, and would provide major reductions in fossil fuel consumption by vehicles and its associated GHG emissions.[32] However, on September 19, 2019, the U.S. EPA withdrew California's Clean Air Act preemption waiver and issued the One National Program Rule, which prohibits states from establishing their own separate fuel economy standards or passing laws that substantially affect fuel economy standards. As a result, California may no longer promulgate and enforce its tailpipe GHG emission standard and zero emission vehicle mandate.[33]

Assembly Bill 2076: Reducing Dependence on Petroleum
Pursuant to AB 2076 (Chapter 936, Statutes of 2000), the CEC and CARB prepared and adopted a joint-agency report, Reducing California's Petroleum Dependence, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand.[34]

[31] U.S. EPA. 2021. "History." https://www.energystar.gov/about/history-0 (accessed October 2021).
[32] CARB. 2011. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles. December 7, 2011.
[33] U.S. EPA. 2019. "Trump Administration Announces One National Program Rule on Federal Preemption of State Fuel Economy Standards." https://www.epa.gov/newsreleases/trump-administration-announces-one-national-program-rule-federal-preemption-state-fuel (accessed September 2021).
[34] CEC. 2003. Reducing California's Petroleum Dependence. Joint Agency Report with California Air Resources Board. https://ww3.arb.ca.gov/fuels/carefinery/ab2076final.pdf (accessed October 2021).

Energy Action Plan

In 2003, the CEC and California Public Utilities Commission set forth their energy policy vision in the Energy Action Plan. The CEC adopted an update to the Energy Action Plan in February 2008 (EAP II) that supplements the earlier Energy Action Plan and examines the State's ongoing actions in the context of global climate change. The nine major action areas in the Energy Action Plan include energy efficiency; demand response; renewable energy; electricity adequacy/reliability/ infrastructure; electricity market structure; natural gas supply/demand/infrastructure; transportation fuels supply/demand/infrastructure; research/development/demonstration; and climate change.[35]

Bioenergy Action Plan (Executive Order S-06-06)

Executive Order (EO) S-06-06 establishes targets for the use and production of biofuels and biopower and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following in-State production targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources:

- Produce 20 percent of biofuels used in California by 2010,
- Produce 40 percent of biofuels used in California by 2020, and
- Produce 75 percent of biofuels used in California by 2050.

EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies potential barriers and recommends actions to address them so the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:[36]

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the State
- Reduce fire danger, improve air and water quality, and reduce waste

Assembly Bill 1007: State Alternative Fuels Plan

In response to AB 1007, the CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, State, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-State production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality.[37]

Senate Bill 350

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires a doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

[35] California Public Utilities Commission. 2008. 2008 Update to the Energy Action Plan. https://www.cpuc.ca.gov/industries-and-topics/natural-gas/energy-action-plans (accessed October 2021).
[36] CEC. 2012. 2012 Bioenergy Action Plan. Prepared by the Bioenergy Interagency Working Group. http://resources.ca.gov/docs/energy_and_climate_change/2012_Bioenergy_Action_Plan.pdf (accessed October 2021).
[37] CEC. 2007. State Alternative Fuels Plan.

2017 Climate Change Scoping Plan

On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2017 Scoping Plan also includes a wide variety of goals related to energy efficiency and renewable energy that are intended to help meet the State's 2030 GHG emissions reduction target.[38]

California Renewable Portfolio Standard and Senate Bill 100

Approved by former Governor Brown on September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standard (RPS) program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

California Energy Efficiency Action Plan

The CEC is responsible for preparing the California Energy Efficiency Action Plan, which covers issues, opportunities, and savings estimates related to energy efficiency in California's building, industrial, and agricultural sectors. The 2019 California Energy Efficiency Action Plan focuses on three goals:

- Doubling energy efficiency savings by 2030 (SB 350)
- Removing and reducing barriers to energy efficiency in low-income and disadvantaged communities
- Reducing GHG emissions from the building sector

The plan offers several recommendations to advance these goals, including expanding funding sources for energy efficiency programs beyond ratepayer portfolios, improving energy efficiency data, integrating energy efficiency into long-term utility planning, enhancing the energy efficiency workforce, improving demand flexibility, and expanding building decarbonization.[39]

California Building Energy Efficiency Standards – California Code of Regulations, Title 24, Part 6

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The 2019 Building Energy Efficiency Standards (California Energy Code), adopted on May 9, 2018, became effective on January 1, 2020. The 2019 Standards move toward cutting nonrenewable energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements.[40]

[38] CARB. 2017. California's 2017 Climate Change Scoping Plan. November 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed October 2021).
[39] CEC. 2019. 2019 California Energy Efficiency Action Plan. November 2019. https://www.energy.ca.gov/programs-and-topics/programs/energy-efficiency-existing-buildings (accessed October 2021).
[40] CEC. 2018. "Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation." May 9, 2018. https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first (accessed October 2021).

California Green Building Standards Code – California Code of Regulations Title 24, Part 11
The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Code). The 2019 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

Advanced Clean Trucks Regulation
On June 25, 2020, CARB approved the Advanced Clean Trucks Regulation, which requires truck manufacturers (any manufacturer that certifies vehicles over 8,500 pounds gross vehicle weight rating) with sales in California to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, all new trucks sold in California must be zero-emission.

4.7.3.3 Local

IEUA Climate Change Action Plan
IEUA adopted a Climate Change Action Plan (CCAP) in 2019, which sets GHG emission reduction goals. IEUA aims to balance regional sustainability efforts with environmentally conscious energy management strategies to identify projects and objectives that holistically address climate change efforts. The CCAP's GHG reduction goals directly related to energy are listed below:

- Strive toward Carbon Neutrality: IEUA's current renewable portfolio is capable of meeting approximately 50 percent of the agency-wide power needs. Increasing this capacity will reduce IEUA's impact on climate change and enhance environmental sustainability.
- Increase Energy Efficiency: Optimizing facility processes and retrofitting equipment can result in less power demand on the electrical grid.
- Reduce Methane Emissions: IEUA will strive toward optimizing resource recovery by pursuing projects that beneficially use the methane generated in the digestion process as a renewable source of heat and/or power generation.
- Renewable Energy Credits: In the event where meeting an 80 percent reduction by 2050 is not possible from the utilization of renewable resources, IEUA plans to purchase renewable energy credits.

The CCAP also establishes goals and objectives to guide development of future projects. IEUA has identified key areas that should be addressed to create a resilient water and wastewater management system that also contributes to GHG emission reductions. The goals and objectives directly related to energy are listed below: [41]

Goal: Maximize system efficiencies.

- Objective: Improve energy efficiencies at IEUA facilities.
- Objective: Develop water use efficiency and/or conservation programs within the region.
- Objective: Strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources

[41] IEUA. 2019. *Climate Change Action Plan.* https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2019/01/2019-IEUA-Climate-Change-Action-Plan-with-Appendices.pdf (accessed October 2021).

General Plans
Cities and counties in the Chino Basin typically include energy-related goals and policies in the State-mandated Conservation Element of their General Plans. In addition, some jurisdictions, like the County of San Bernardino, include a standalone element related to energy conservation and renewable energy in their General Plans. The energy-related goals and policies in General Plans generally include intentions to increase the energy efficiency of new and existing development and expand renewable energy production.

Municipal Codes
The municipal codes of cities and counties in the Chino Basin usually include provisions to adopt the latest iteration of the California Building Energy Efficiency Standards and CALGreen as the local building code. In some instances, local municipal codes may include more stringent requirements for energy efficiency and renewable energy usage than the State building codes, which are referred to as "reach codes." However, no reach codes have been adopted by jurisdictions in the Chino Basin. In addition, it should be noted that California Government Code Section 53091 exempts IEUA, as a regional public water purveyor and utility, from local zoning and building ordinances.

4.7.4 Thresholds of Significance

According to Appendix G, Section VI, of the CEQA Guidelines, a project would have a significant effect on energy if the project would:

a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In addition, Appendix F of the CEQA Guidelines states that EIRs may include a discussion of the potential energy impacts of proposed projects and presents a list of items that may be considered in the EIR impact analysis.

4.7.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP related to energy.

Methodology

Energy consumption can also be considered in terms of direct and indirect impacts, depending on the energy source. For example, direct impacts would be associated with fuel consumption by construction vehicles, and indirect impacts would be associated with the demand for electricity from SCE. Energy use and energy demands for the proposed CBP were developed based on information in Chapter 3, *Project Description*. Operational energy consumption associated with the CBP was also estimated based on energy consumption estimates from similar projects in Southern California. Based on these similar projects, it was assumed individual projects implemented under the proposed CBP would consume the following quantities of energy each year for operation:[42, 43]

- Injection well: 5 kilowatt-hours (kWh) per acre-foot (AF) per well
- Extraction well: 100 kWh per AF per well

[42] Carpinteria Valley Water District (CVWD). 2019. "Carpinteria Advanced Purification Project Environmental Impact Report." July.
[43] Sanchez, Carolina, electronic communication. 2020. "Energy information for Aquifer Storage and Recovery wells." January 10.

- AWPF: 1,665 kWh per AF
- Pump station: 600 kWh per AF
- Wellhead treatment facilities: 10 kWh per AF
- Brine treatment and disposal: 625 kWh per AF

Projects implemented under the CBP are expected to be operational in 2028. At that time, the CBP would provide up to 50,000 acre-feet per year (AFY) of advanced treated water to Metropolitan in dry or critically dry years. In return, up to 50,000 AFY of SWP water that would otherwise have been exported would be stored in Lake Oroville and used to enhance instream flows in the Feather River. By precluding the need for the export of 50,000 AF of SWP water, the CBP would result in energy savings and an associated reduction in indirect GHG emissions in each year this occurs. The amount of electricity required to supply, treat, and distribute water in Southern California is approximately 11.111 MWh per million gallons, or 3.612 MWh per acre-foot (AF).[44] Thus, in call years when the CBP would avoid the import of approximately 50,000 AFY of water from the SWP, it would conserve up to approximately 181,000 MWh of electricity.

Impact Analysis

a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction
Construction activities associated with buildout of the proposed CBP would use energy primarily as fuel for the construction vehicle fleet and for vehicle trips to transport workers, materials, supplies, and soil to and from individual construction sites. Consumption of fuel during construction would be temporary, and would not represent an ongoing, long-term demand. Construction contractors for individual CBP projects would be required to adhere to applicable regulations for reducing criteria air pollutant emissions, which would also result in energy conservation. These regulations include CARB's Regulation for In-Use Off-Road Diesel Vehicles, CARB's Regulation of In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles, CARB's Truck and Bus Regulation, and Title 13 California Code of Regulations Section 2449(d)(3) and Section 2485. Together, these regulations limit unnecessary vehicle idling to five minutes, require older (and less fuel-efficient) construction equipment to be retired, and require heavy-duty diesel vehicles operating in California to be equipped with an engine that meets California emissions standards. Construction would involve equipment and trips that are typical for the type of facilities being constructed and would not involve excessive or unnecessary consumption of fuel. Through compliance with existing applicable regulations, construction energy consumption associated with buildout of the CBP would not be inefficient, wasteful or unnecessary. Impacts would be less than significant.

Operation
Operation of CBP facilities would be energy intensive and would require the use of electricity for treatment, conveyance, injection, and extraction of water supplies.[45] Energy consumption from the use of groundwater monitoring wells would be negligible. In addition, the storage reservoir, pipelines, and turnouts would not directly consume energy because water would be pumped into and through

[44] CAPCOA. 2010. "Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures." August. https://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/quantifying-greenhouse-gas-mitigation-measures.pdf?sfvrsn=0 (accessed October 2021).
[45] CBP facilities would not consume natural gas.

these facilities directly from wells or through booster pump stations. Furthermore, although long-term operation of individual projects implemented under the CBP would involve occasional vehicle trips for operations and maintenance of the facilities, the energy consumption associated with these vehicle trips is assumed to be negligible because CBP facilities would largely be monitored remotely. As a result, CBP facilities would require an average of approximately five to six vehicle trips per day for inspections, testing, and maintenance, and these trips would largely be incorporated into existing operations and maintenance activities. Therefore, this analysis focuses on evaluating electricity consumption by the proposed pump stations, injection wells, extraction wells, wellhead treatment facilities, and AWPF (including brine treatment and disposal).

Estimated annual energy consumption associated with operation of CBP facilities is summarized in **Table 4.7-4** for both call years and non-call years. As shown therein, operation of CBP facilities would require approximately 64,280 megawatt-hours (MWh) of electricity in call years and 36,280 MWh of electricity in non-call years. However, in call years, the CBP would conserve up to approximately 181,000 MWh of electricity by precluding the import of SWP water. Therefore, in call years, the CBP would result in a net decrease in electricity consumption of approximately 116,720 MWh as compared to baseline conditions.

Table 4.7-4
ANNUAL OPERATIONAL ELECTRICITY CONSUMPTION

Project Component	kWh/AF/year	Call Year		Non-Call Year	
		AFY	MWh/year	AFY	MWh/year
Injection wells	5	15,000	75	15,000	75
Extraction wells	100	50,000	5,000	10,000	1,000
Pump stations	600	50,000	30,000	10,000	6,000
AWPF	1,665	17,000	28,305	17,000	28,305
Wellhead treatment	10	17,000	170	17,000	170
Brine disposal	625	1,167	730	1,167	730
Total CBP Electricity Consumption	--	--	**64,280**	--	**36,280**
Offset SWP Electricity Consumption	3,621	50,000	(181,000)	--	0
Net Change in Baseline Electricity Consumption	--	--	**(116,720)**	--	**36,280**

kWh = kilowatt-hour; AF = acre-feet; AFY = acre-feet per year; MWh = megawatt-hour
Source: Appendix 8, Volume 2 to this DPEIR.

Furthermore, as shown in **Table 4.7-5**, the CBP would result in a net decrease of approximately 240,500 MWh in total electricity consumption associated with local water supplies as compared to baseline conditions over the 25-year term of the proposed water transfer agreements.

Table 4.7-5
OVERALL OPERATIONAL ELECTRICITY CONSUMPTION

Scenario	Annual Electricity Consumption (MWh/year)	Number of Years during Water Transfer Agreement	Total Electricity Consumption (MWh)
Call Years	**(116,720)**	7.5	(875,400)
Non-call Years	**36,280**	17.5	634,900
		TOTAL	**(240,500)**

kWh = kilowatt-hour; AF = acre-feet; AFY = acre-feet per year; MWh = megawatt-hour
Source: Appendix 8, Volume 2 to this DPEIR.

CBP facilities would be constructed in compliance with existing regulations for building energy efficiency. In addition, the CBP includes exploration of options for new, on-site energy generation facilities in the IEUA service area, such as in-conduit hydropower facilities in locations of the potable water distribution system where energy can be produced in conjunction with reducing system pressure. Finally, investment in local water supplies that offsets the need for imported water is considered to be necessary to begin to reduce the amount of energy associated with water conveyance in the State. The 2017 Scoping Plan recognizes that about two percent of the total energy used in the State is related to water conveyance. As a result, the plan calls for, "increased water conservation and efficiency, improved coordination and management of various water supplies, greater understanding of the water-energy nexus, and deployment of new technologies in drinking water treatment, groundwater remediation and recharge, and potentially brackish and seawater desalination."[46] Therefore, given that the CBP would result in an overall net reduction in electricity consumption associated with local water supplies over the 25-year term of the proposed water transfer agreement and that CBP facilities would comply with existing applicable regulations, operational energy consumption associated with the CBP would not be inefficient, wasteful or unnecessary.

It should be noted that the proposed CBP is forecast to cause a reduction in surplus flows to the Santa Ana River (SAR). While IEUA would continue to meet their baseflow obligations to the SAR, and is projected to exceed their baseflow obligations to the SAR even with the proposed diversions of recycled water from IEUA, WRCRWA, and Rialto, the proposed CBP may result in a reduction in surplus flows to the SAR. IEUA is aware that Orange County Water District (OCWD) currently recharges essentially all baseflow of the SAR water discharged from the Prado Dam, and understands that it may also rely on the surplus flows that IEUA has contributed to the SAR in recent years. Given the above, the proposed CBP could have a potential to reduce surplus flows to the SAR, which OCWD may rely on as a contribution to their overall groundwater supply required to meet their service area demand. OCWD has indicated that it may need to increase the volume of imported water purchased in order to replace any reduction in SAR baseflow. While IEUA's modeling of the CBP suggests that the CBP would not result in a violation of the baseflow obligation to the SAR (refer to Subchapter 4.11, Hydrology and Water Quality, and the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2 of this DPEIR), if OCWD has come to rely on surplus flows and would require imported water to supplement their supply as a result, the annual energy emissions that would be offset by precluding the need for imported SWP water by the CBP may be overestimated from a cumulative energy use perspective.

If the CBP results in OCWD requiring an increase in imported water due to reduced surplus flows to the SAR, the cumulative energy demand would be increased commensurate with the amount of imported water OCWD would require from the SWP, thereby requiring energy to deliver an unknown amount of imported water to OCWD to supplement the reduced SAR supply. This analysis assumes that, while the energy utilized to convey SWP to Southern California is not in and of itself inefficient, wasteful or unnecessary, in the context of this project, and when compared to this project, the energy that is offset as a result of reducing of imported water to Southern California is considered a benefit. As such, it is assumed that a significant impact would occur if OCWD would require an increase in imported water over the 25 year life of this project specifically as a result of reduced surplus flows to the SAR, that would be greater than that which would be reduced by implementation of the CBP (i.e. 375,000 AF over 25 years). While it is somewhat speculative to determine to what extent the diversion of recycled water dedicated to the proposed CBP from the SAR would require increased use of imported water by OCWD, it is assumed that, given the estimated 8,000 AF surplus flows that

[46] CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed September 2021).

would continue to occur above IEUA's baseflow obligations, the amount of imported water OCWD would require over the 25 year life of the program would be less than that which the proposed CBP would offset. As such, given the above, the proposed CBP would not result in direct or indirect inefficient, wasteful or unnecessary operational energy consumption. Impacts would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less than Significant.

Mitigation Measures: No mitigation is required as impacts would be less than significant.

Level of Significance After Mitigation: Less Than Significant.

Cumulative Impact Analysis

Cumulative development in the Chino Basin would increase demand for energy resources. However, new iterations of the California Building Energy Efficiency Standards and CALGreen would require increasingly more efficient appliances and building materials that reduce energy consumption in new development. In addition, vehicle fuel efficiency is anticipated to continue improving through implementation of the existing Pavley regulations under AB 1493, and implementation of the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy would reduce per capita vehicle miles traveled in the Chino Basin. Cumulative development in the Chino Basin will also be required to be consistent with applicable provisions of local General Plans related to energy efficiency and renewable energy as well as the Southern California Association of Governments' Regional Transportation Plan/Sustainable Communities Strategy. Furthermore, as shown in **Table 4.7-2** and **Table 4.7-3**, the percentage of statewide electricity and natural gas consumption attributed to San Bernardino and Riverside Counties (approximately 11 percent and eight percent, respectively) is lower than the counties' proportion of the statewide population (approximately 12 percent). Therefore, a significant cumulative impact related to the wasteful, inefficient, and unnecessary consumption of energy would not occur.

Cumulative Measures: No mitigation is required as impacts would be less than significant.

Level of Significance After Mitigation: Less Than Significant.

b) Would the project conflict with or obstruct existing energy standards or a State or local plan for renewable energy or energy efficiency?

2017 Scoping Plan

The CBP would develop a local water supply and would reduce the demand for energy required to import water from the SWP to Southern California. In this way, the CBP would be consistent with statewide plans that address the energy intensity of the State's water delivery systems. An overarching goal of the 2017 Scoping Plan is to "make conservation a California way of life by using and reusing water more efficiently through greater water conservation, drought tolerant landscaping, stormwater capture, water recycling, and reuse to help meet future water demands and adapt to climate change." The 2017 Scoping Plan notes that recycled water has the potential to reduce overall energy use and GHG emissions if it replaces (rather than serves as an alternative to) an existing water supply with higher GHG emissions.[47] The CBP would replace imported SWP water, which is

[47] CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed September 2021).

energy-intensive, with a local, recycled water source in call years. Furthermore, IEUA would procure energy to serve CBP facilities from SCE, which has historically achieved the RPS and anticipates meeting the RPS of 60 percent renewable energy by 2030.[48] IEUA would also explore options for using additional on-site renewable energy, such as the use of a 2.5-MW solar array at the Inland Empire Regional Composting Facility and in-conduit hydropower facilities in locations of the potable water distribution system where energy can be produced in conjunction with reducing system pressure. As such, the CBP would not obstruct the 2017 Scoping Plan. Impacts would be less than significant.

IEUA CCAP
The IEUA CCAP sets GHG emission reduction goals for IEUA operations, some of which are related to energy efficiency and the use of renewable energy (see Section 4.7.3.3, *Regulatory Setting – Local*). The CBP includes components that intentionally lower the power demand on the electrical grid, such as the potential inclusion of in-conduit hydropower facilities at certain locations of the potable water distribution system where energy can be produced in conjunction with reducing system pressure. Furthermore, during call-years, the CBP would offset imported water from the SWP, which would save energy and preclude SWP-related energy consumption. The CBP would also incorporate the use of available on-site renewable energy sources at RP-4, including the 1-MW wind turbine and 1.5-MW battery, to supply part of the energy demand of CBP facilities, if possible. Moreover, the CBP may use energy generated by the 2.5-MW solar array at the Inland Empire Regional Composting Facility. Therefore, the CBP would support the CCAP objective to strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources. Accordingly, the CBP would not conflict with the CCAP, and impacts would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less than Significant.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis
As discussed above, the project would be consistent with CARB's 2017 Scoping Plan and the IEUA CCAP, which were adopted to reduce the cumulative impact of energy consumption statewide and within IEUA's service area, respectively. Therefore, the project would not have a cumulatively considerable contribution to a significant cumulative impact related to the plans adopted for renewable energy and energy efficiency.

CEQA Guidelines Appendix F Considerations
Most of the energy needs of the proposed CBP would be met by SCE, although the proposed AWPF may receive a portion of its energy needs from on-site sources at RP-4, such as the 1-MW wind turbine and 1.5-MW battery. In 2015, SCE delivered more than 87 billion kWh of electricity.[49] The annual electricity demand of the proposed CBP in call years (approximately 64,280 MWh/year as shown in

[48] California Public Utilities Commission. 2020. "2020 California Renewables Portfolio Standard: Annual Report." November. https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/2020-rps-annual-report.pdf (accessed October 2021).
[49] SCE. 2021. "Who We Are." https://www.sce.com/about-us/who-we-are (accessed October 2021).

Table 4.7-) would be roughly 0.07 percent of SCE's total annual electricity service (87 million MWh/year). Furthermore, in call years, the CBP would avoid the use of approximately 181,000 MWh/year associated with the import of SWP water, and a portion of this net reduction in electricity usage would reduce demand on regional SCE infrastructure during these years. In non-call years, the CBP annual electricity demand (approximately 36,280 MWh/year as shown in **Table 4.7-**) would be roughly 0.04 percent of SCE's total annual electricity deliveries. Thus, the proposed CBP's energy demand would be minimal compared to SCE's overall total annual electricity service. IEUA, as part of project planning, would coordinate with SCE to ensure adequate electrical service capacity and distribution facilities would be available. If necessary, IEUA would coordinate and develop additional sources of supply to meet the CBP's energy needs. Therefore, the CBP would not impact local and regional energy supplies, including peak and base period supplies.

Cumulative Impact Analysis
Cumulative growth in the SCE service area would affect regional energy demand. SCE energy demand planning is based on future growth predictions from the General Plans of local jurisdictions. For this reason, development consistent with the applicable General Plan would also be consistent with SCE demand planning. Cumulative development within the SCE service area is not anticipated to result in a significant impact in terms of impacting energy supplies because the majority of cumulative projects would be consistent with their respective General Plans and the growth anticipated by SCE. The CBP would serve water supply needs for existing and planned water demand and would not result in or accommodate unplanned growth. Furthermore, as shown in **Table 4.7-**, the proposed CBP would result in a net reduction in baseline electricity consumption of approximately 116,720 MWh/year in call years, and a portion of this net reduction in electricity usage would reduce demand on regional SCE infrastructure during these call years. Therefore, the CBP, in combination with other cumulative projects, would not result in cumulative energy impacts.

Cumulative Measures: None required.

Level of Significance After Mitigation: Less Than Significant.

4.7.6 Cumulative Impacts

The cumulative analysis of each Energy issue evaluated in Subchapter (4.7) of the DPEIR determined that the proposed project would not result in a cumulatively considerable contribution to cumulative energy impacts within the Chino Basin without the need for mitigation. While cumulative development within the region may result in significant cumulative impacts related to area energy consumption, the potential for the proposed CBP to contribute to a cumulatively considerable contribution to such impacts has been minimized through the offset in energy consumption due to a reduction in imported water deliveries. Since this is an essential component of the CBP, no mitigation is required.

4.7.7 Unavoidable Significant Impacts

The programmatic evaluation of energy presented in the preceding analysis demonstrates that neither construction nor operation of individual projects under the proposed CBP would result in the wasteful, inefficient, or unnecessary consumption of energy resources; affect local and regional energy supplies; or conflict with or obstruct existing energy standards or a State or local plan for renewable energy or energy efficiency. Therefore, no unavoidable significant impact to energy would result from implementing the proposed CBP.

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4.8 GEOLOGY AND SOILS

4.8.1 Introduction

This subchapter evaluates the potential environmental impacts to geology and soils from implementation of the Chino Basin Program (CBP). The following section discusses the geology of the project site including: Faults, Seismic-Related Ground Failure, Liquefaction, and Landslides. Additionally, the following section discusses the soils which underlie the project site including the potential for erosion, the stability of the soils, loss of topsoil, and the potential for expansive soils, etc.

These issues are discussed below as set in the following framework:

- Introduction
- Environmental Setting: Geology and Soils
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- IEUA, *Facilities Master Plan Final Environmental Impact Report* (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR)
- IEUA, *Final Program Environmental Impact Report for the Optimum Basin Management Program* (SCH#200041047), July 2000 prepared by Tom Dodson & Associates (2000 OBMP PEIR)
- San Bernardino County, *San Bernardino Countywide Plan*, November 2, 2020
- SARWQCB, 2016. San Bernardino County Municipal NPDES Storm Water Permit. Available at: www.waterboards.ca.gov/santaana/water_issues/programs/stormwater/san_bernardino_permit.shtml. Accessed August 16, 2016
- West Yost. *Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program.* October 15, 2021 (Appendix 4, Volume 2 to this DPEIR)

No comments pertaining to geology and soils were received in response to the Notice of Preparation and no comments pertaining to geology and soils were received at the Scoping Meeting held on behalf of the CBP.

4.8.2 Environmental Setting: Geology and Soils

4.8.2.1 Regional Geology

According to the California Geological Survey (CGS) Division of the California Department of Conservation (DOC), the Chino Basin is part of a large and broad alluvial-filled plain situated between the San Gabriel Mountains to the north (Transverse Ranges) and the elevated Perris Block to the south (Peninsular Ranges). The surrounding mountains and bedrock hills were uplifted by tectonic compression and faulting during the Quaternary Period, and sediments were eroded and washed-out of the mountains by streams and deposited in the low-lying depressions on the Perris Block to form the groundwater reservoirs of the Chino Basin and its neighboring groundwater basins. Major faults in the area—the Cucamonga Fault Zone, the Rialto-Colton Fault, the Red Hill-Etiwanda Avenue Fault, the San Jose Fault, the Central Avenue Fault, and the Chino Fault—are at least partly responsible for the uplift of the surrounding mountains and the

depression of the basin. These faults are significant in that they are known barriers to groundwater flow within the alluvial aquifer-system(s) and define some of the external boundaries of the basins by influencing the magnitude and direction of groundwater flow.

Quaternary alluvial deposits and recent soils comprise the majority of the stratigraphy of the County. Other strata may include Tertiary marine and non-marine non-sedimentary and volcanic units; Mesozoic marine sedimentary; metasedimentary, metavolcanic, and plutonic rocks, Paleozoic sedimentary and metasedimentary units; and Precambrian igneous and metamorphic rocks (IEUA, 2000).

4.8.2.2 Topography

The Chino Basin is located in Southern California within the west end of the San Bernardino Valley; just east of Los Angeles County, northeast of Orange County, and north of the Riverside County boundary lines. There are three primary physiographic regions within San Bernardino County: Valley, Mountain, and Desert regions. The Chino Basin lies within the Valley Region which consists of the area south of the San Gabriel and San Bernardino Mountains and includes the Upper Santa Ana Valley and Chino Hills.

The service area consists primarily of the Chino Basin which is an alluvial valley that is relatively flat from east to west, sloping north to south at a one to two percent grade. Basin elevation ranges from 2,000 feet adjacent to the San Gabriel Foothills to approximately 500 feet near Prado Dam. The Chino Basin is bordered to the north by the Cucamonga Basin; to the east by the Rialto-Colton Basin and the Jurupa Mountains; to the south by the Santa Ana River and the Temescal Basin; and to the west by the Chino Hills, Puente Hills, and the Six Basins Basin (IEUA, 2000).

Seismic Hazards

The high population density compared to the Mountain and Desert regions coupled with the presence of the San Andreas, San Jacinto, and Cucamonga faults and close proximity to other major faults result in the Valley Region of the county having a greater risk for populations and structures to be exposed to potential geological hazards (San Bernardino County, 2021).

There are three active faults (Elsinore [Chino] Fault Zone, Red Hill-Etiwanda Avenue Fault Zone, and Sierra Madre Fault Zone) within the Chino Basin. There are additional active or potentially active faults outside the Chino Basin and within or near the county with the potential to create a magnitude earthquake of 3.7 or greater up to an approximate magnitude of 7.5-8.0. There is also an extensive history of large, damaging earthquakes occurring within the county ranging from the 1812 Wrightwood earthquake (7.5 magnitude) to the 1999 Hector Mine earthquake (7.1 magnitude). In addition to strong ground shaking from earthquakes on faults located within the region, large earthquakes on faults near the county boundaries also have and will continue to impact property within the county. Many of the other potential geologic hazards in the region are associated with earthquake activity including surface fault rupture, flooding due to potential dam failure, soil liquefaction, and seismically induced landslides. Surface fault rupture can directly impact properties traversed by or adjacent to an active fault. The other seismic hazards may be triggered by earthquakes up to several tens of kilometers from a site (San Bernardino County, 2021).

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can

vary for different faults, or even along different strands of the same fault. Ground rupture is considered more likely along active faults. Site locations for the proposed individual projects under the CBP may be within an Alquist-Priolo Earthquake Fault Zone, as designated by the Alquist-Priolo Earthquake Fault Zoning Act (San Bernardino County, 2021). Active faults within the Chino Basin are shown on Exhibit 1. According to the Riverside County General Plan, the portion of the Chino Basin that is located in Riverside County does not overlie any Alquist-Priolo special studies zones.

Ground Shaking

According to the DOC's Earthquake Shaking Potential Assessment tool—the Ground Motion Interpolator[1]—the Chino Basin is within an area subject to high frequency shaking potential. High frequency shaking areas are in regions near major, active faults and on average experience stronger earthquake ground shaking more frequently. This intense shaking can damage strong, modern buildings. Ground shaking intensity varies depending on the overall earthquake magnitude, distance to the fault, focus of earthquake energy, and type of geologic materials underlying an area. The Modified Mercalli Intensity (MMI) scale is commonly used to express earthquake effects due to ground shaking because it expresses ground shaking relative to actual physical effects observed by people during a seismic event. MMI values range from I (earthquake not felt) through a scale of increasing intensities to XII (nearly total damage). Earthquakes on the various active and potentially active fault systems within and near the Chino Basin can produce a wide range of ground shaking intensities.

Liquefaction and Landslide Hazards

Soil liquefaction is a phenomenon whereby unconsolidated and/or near saturated soils lose cohesion and are converted to a fluid state as a result of severe vibratory motion. The relatively rapid loss of soil shear strength during strong earthquake shaking results in the temporary fluid-like behavior of the soil. During liquefaction, soils lose strength and ground failure may occur. Secondary ground failures associated with liquefaction include lateral spreading or flowing of stream banks or fills, sand boils, and subsidence. Areas characterized by water-saturated, cohesionless, and granular soils are most susceptible to liquefaction and usually at depths of less than 50 feet, especially in areas with a shallow water table. The groundwater table can fluctuate greatly in association with groundwater recharge activities, both natural and artificial. During years of high groundwater recharge, the groundwater table could potentially be shallow enough to present a liquefaction hazard in the areas of the existing recharge basins. Portions of the Chino Basin are within liquefiable zones as discussed in the General Plans for the cities and counties located within the Chino Basin.

Landslides are the down-slope displacement of rock, soils, and debris. The susceptibility of land (slope) failure is dependent on slope and geological formations and influenced by levels of rainfall, excavation, or seismic activities. Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. The southwestern portion of the Chino Basin is located within landslide hazard zones, as defined in the Seismic Hazard Zones map for San Bernardino County. Landslides and mudflow hazards exist throughout the county, on steep hillsides and in creek and streambed areas. These can be triggered by earthquakes, heavy rain events, and other causes. Specifically, Chino Hills is underlain by landslide-prone marine rocks, presenting the greatest potential slope stability problem in the service area (San Bernardino County, 2021).

[1] https://www.conservation.ca.gov/cgs/Pages/PSHA/ground-motion-interpolator.aspx

4.8.2.3 Soils

Soils within the Valley Region generally include deep well-drained sands, sandy loams, silty loams on level alluvial basins and fans; and shallow to deep, well to excessively drained, sandy loams on foothills and upland areas (IEUA, 2000). The soils present within the service area vary slightly in physical properties but share similar characteristics. Soils within the southwestern portion of San Bernardino County (including the Chino Basin) are presented in **Table 4.8-1** below.

Subsidence

Subsidence of the ground surface can occur under static conditions (i.e., due to consolidation settlement from overlying load or long-term groundwater extraction) but can also be accelerated and accentuated by earthquakes and tectonic activity. Subsidence of loose, unconsolidated soils generally occurs slowly, but can cause significant structural damage.

San Bernardino County has undergone tectonic activity, including the uplifting of the San Bernardino Mountains in relation to the Valley Region. This activity has raised some portions of the Earth's crust, while others have subsided. This tectonic subsidence is of concern during very large earthquakes. Furthermore, subsidence caused by groundwater withdrawal is of concern to alluvial valleys of the county. The entire alluvial valley area in the southwestern portion of the county, primarily the Chino area, has experienced subsidence from groundwater withdrawal. Subsidence from 0.8 to 5.8 feet is possible in these areas (San Bernardino County, 2021).

Table 4.8-1
SOILS WITHIN SOUTHWESTERN SAN BERNARDINO COUNTY

Soil Type	Acres
Alo clay, 15 to 30 percent slopes	3.2
Calleguas clay loam, 50 to 75 percent slopes, eroded	10.5
Soper gravelly loam, 30 to 50 percent slopes	31.8
Alo clay, 30 to 50 percent slopes, warm MAAT, MLRA 20	956.0
Chino silt loam	7,840.2
Chualar clay loam, 0 to 2 percent slopes	871.0
Chualar clay loam, 2 to 9 percent slopes	2,706.2
Chualar clay loam, 9 to 15 percent slopes	1,132.7
Cieneba sandy loam, 9 to 15 percent slopes	430.7
Cieneba-Friant sandy loams complex	1,124.9
Cieneba-Rock outcrop complex, 30 to 50 percent slopes, MLRA 20	16,535.3
Crafton-Rock outcrop complex, eroded	761.3
Delhi fine sand	22,344.7
Fontana clay loam, 15 to 30 percent slopes	2,067.3
Fontana clay loam, 30 to 50 percent slopes	9,715.9
Friant-Rock outcrop complex	1,309.7
Garretson very fine sandy loam, 2 to 9 percent slopes	479.3
Gaviota-Rock outcrop complex	5,248.7
Quarries and Pits soils	872.1
Grangeville fine sandy loam	7,763.9

Soil Type	Acres
Grangeville fine sandy loam, saline-alkali	1,155.1
Greenfield sandy loam, 2 to 9 percent slopes	7,651.3
Greenfield fine sandy loam, 9 to 15 percent slopes	630.7

Source: NRCS, 2016

Erosion

Soil erosion is the detachment and movement of soil materials through natural processes or human activities. Natural processes include water, landslide, fire, flood, and wind. Human-made causes could include irresponsible grading and other construction practices, use of off-road vehicles, and other indiscriminate disruptions of soil. Wind is the primary cause of erosion in San Bernardino County. In the Valley Region, especially at the base of mountains and foothills like Chino Hills and northern Rancho Cucamonga, wind is more severe, and therefore, erosion is more prevalent. According to the San Bernardino Countywide Plan, severe erosion can be a problem anywhere in the county, especially when precipitation and/or wind combine with uncovered soil (San Bernardino County, 2021).

Expansive Soils

Expansive soils contain significant amounts of clay particles that have the ability to give up water (shrink) or take on water (swell). When these soils swell, the change in volume can exert substantial pressures on loads that are placed on them, such as loads resulting from building and structure foundations or underground utilities, and can result in structural distress and/or damage. Often, grading, site preparations, and backfill operations associated with subsurface structures can eliminate the potential for expansion. Linear extensibility and plasticity are used to describe the shrink-swell potential of soils. If linear extensibility is greater than 3 percent (classified as Moderate potential), shrinking and swelling can cause damage to buildings, roads, and other structures. Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency but are not typically expansive. However, soils within clay-rich units with moderate to high shrink-swell potential are located throughout the Chino Basin.

4.8.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.8.3.1 Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1997 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the act established the National Earthquake Hazard Reduction Program (NEHRP), which refined the description of agency responsibilities, program goals, and objectives. NEHRP’s mission includes improvement of understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. NEHRP designates the Federal Emergency Management Agency as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs

under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

4.8.3.2 State

Alquist-Priolo Earthquake Fault Zoning Act
The Alquist-Priolo Earthquake Fault Zoning Act became law in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The purpose of the Alquist-Priolo Act is to regulate development on or near active fault traces to reduce the hazard of fault rupture and to prohibit the location of most structures for human occupancy across these traces. Cities and counties must regulate certain development projects within the zones, which includes withholding permits until geologic investigations demonstrate that development sites are not threatened by future surface displacement. Surface fault rupture is not necessarily restricted to an Alquist-Priolo Zone. Each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace, because many active faults are complex and consist of more than one branch. There is the potential for ground surface rupture along any of the branches.

The service area includes four cities with land area that falls within an Alquist-Priolo Earthquake Fault Zone: Upland, Fontana, Chino Hills, and Rancho Cucamonga.

Seismic Hazards Mapping Act
The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Sections 2690-2699.6) was adopted to reduce the threat to public safety and to minimize the loss of life and property by identifying and mitigating ground failure caused by strong earthquakes, namely liquefaction and slope failure. The Seismic Hazards Mapping Act requires the State Geologist to delineate seismic hazard zones, also known as “zones of required investigation,” where regional (that is, not site specific) information suggests that the probability of a hazard requiring mitigation is adequate to warrant a site specific investigation. The fact that a site lies outside a zone of required investigation does not necessarily mean that the site is free from seismic or other geologic hazards. Where a project—defined by the act as any structures for human occupancy or any subdivision of land that contemplates the eventual construction of structures for human occupancy—is within a zone of required investigation, lead agencies must apply minimum criteria for project approval. The most basic criteria for project approval are that the owner/developer adequately demonstrates seismic hazards at the site have been evaluated in a geotechnical investigation, that appropriate mitigation measures have been proposed, and that the lead agency has independently reviewed the adequacy of the hazard evaluation and proposed mitigation measures. Both the geotechnical report and the independent review must be performed by a certified engineering geologist or registered civil engineer. These criteria, along with seismic hazard evaluation and mitigation standards, are outlined in CGS Special Publication 117A, revised and re-adopted in September of 2008 by the State Mining and Geology Board (CGS, 2008). The Chino basin includes seismic hazard zones susceptible to liquefaction and landslides.

California Building Code
The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under State law, all building standards must be centralized in Title 24 or they are not enforceable. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and

maintenance of all buildings and structures within its jurisdiction. The current CBC is based on the 2018 International Building Code published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction, and the American Concrete Institute. ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The building department of every city and county is required to enforce all the provisions of the CBC, and is authorized to issue a construction permit for the erection, construction, reconstruction, installation, moving, or alteration of any building or structure.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), including excavation, grading, and fills (Section 1804). The CBC requires geotechnical investigations be conducted prior to construction unless waived by the designated building official (which could occur when satisfactory data from adjacent areas demonstrates an investigation is not necessary). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. Appendix G, Section VII, of the CEQA Guidelines states that expansive soil would be characterized as defined in Table 18-1-B of the 1994 Uniform Building Code. However, that table is no longer used[2] and the CBC's current definition of expansive soils is as follows:

> 1803.5.3, Expansive Soil. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Soils meeting all four of the following provisions shall be considered expansive, except that tests to show compliance with Items 1,2 and 3 shall not be required if the test prescribed in Item 4 is conducted:
>
> 1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318
> 2. More than 10 percent of the soil particles pass a No. 200 sieve (75 micrometers), determined in accordance with ASTM D 422
> 3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422
> 4. Expansion index greater than 20, determined in accordance with ASTM D 4829

The CBC also includes earthquake design requirements that take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications for individual projects are then determined according to the SDC.

Surface Mining and Reclamation Act of 1975

The Surface Mining and Reclamation Act (SMARA) of 1975 (Chapter 9, Division 2, Section 2710 et seq. of the Public Resources Code) requires the State Mining and Geology Board to adopt

[2] The Uniform Building Code is no longer the basis for the CBC, which is now based on the 2018 International Building Code. Because the considerations in CEQA Guidelines Appendix G are advisory rather than compulsory, and Section VII thereof has not yet been revised to reflect this change, this EIR relies on the 2018 International Building Code, which provides the basis for the CBC.

state policies for reclaiming mined lands and conserving mineral resources. Title 24 of the California Code of Regulations, Division 2, Chapter 8, Subchapter 1 contains these policies.

In accordance with SMARA, the State has established the California Mineral Land Classification System to help identify and protect mineral resources in areas that are subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Protected mineral resources include construction materials, industrial and chemical mineral materials, metallic and rare minerals, and nonfluid mineral fuels.

The California Professional Engineers Act (Building and Professions Code Sections 6700-6799)
California currently regulates the use of the practice and the use of the title of Civil, Electrical, and Mechanical Engineer. These three are known as Practice Acts. Only those registered are authorized to use the title, practice, or offer to practice in that discipline.[3]

Code of Professional Conduct, as administered by the California Board of Professional Engineers, Land Surveyors, and Geologists
The Board for Professional Engineers, Land Surveyors, and Geologists (BPELS) regulates the practices of engineering, land surveying, geology, and geophysics in the state of California in order to safeguard the life, health, property, and welfare of the public.

The main purpose and duties of BPELS include:[4]

- Licensing qualified individuals (not companies) as professional engineer, land surveyors, geologist, and geophysicists, based on experience and successfully passing examinations.
- Establishing regulations and promoting professional conduct.
- Enforcing laws and regulations.
- Providing information to the public on using professional engineering and land surveying services.

To protect and safeguard the health, safety, welfare, and property of the public, every person who is licensed by the Board as a professional engineer, including licensees employed in any manner by a governmental entity or in private practice, shall comply with this Code of Professional Conduct. A violation of this Code of Professional Conduct in the practice of professional engineering constitutes unprofessional conduct and is grounds for disciplinary action.

4.8.3.3 Local

California Government Code Section 53091(d) specifies that “Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.” Consequently, many of the facilities included in the CBP are exempt from certain local ordinances. However, the local building agencies of the cities of Chino Hills, Chino, Montclair, Upland, Ontario, Rancho Cucamonga, and Fontana retain authority to issue construction permits in compliance with the California Building Code.
The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities has its own General Plan elements that pertain to geology, soils, and mineral resources.

[3] https://www.nspe-ca.org/licensure/inception-of-the-ca-pe-act
[4] https://simasgovlaw.com/what-is-the-board-for-professional-engineers-land-surveyors-and-geologists/

4.8.4 Thresholds of Significance

According to Appendix G, Section VII, of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   (ii) Strong seismic ground shaking?
   (iii) Seismic related ground failure, including liquefaction?
   (iv) Landslides?
b) Result in substantial soil erosion or the loss of topsoil?
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?
d) Be located on expansive soil, as defined in [California] Building Code [Section 1803.5.3], creating substantial direct or indirect risks to life or property?[5]
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

4.8.5 Potential Impacts

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
   (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Given that the precise locations of the proposed wells and monitoring devices are presently unknown, it is possible that any of the future wells and monitoring devices could be located within an area delineated as an Alquist-Priolo Earthquake Fault Zone. There are three faults delineated on the Alquist-Priolo Earthquake Fault Zoning Map within and adjacent to the Chino Basin: the Elsinore Fault Zone (Chino Fault), which crosses the southwestern boundary of the Chino Basin; the Red Hill-Etiwanda Avenue Fault, which traverses a small section of the northern boundary of the Chino Basin; and a segment of the Sierra Madre Fault Zone (Cucamonga Fault), Cucamonga Section passes through the northern portion of the Chino Basin. Based on the location of the proposed wells, it is unlikely that the wells would be installed within an Alquist-Priolo Fault Zone. These fault zones, shown on the San Bernardino Countywide Plan Earthquake Fault Zone Map (**Figure 4.8-1**) are located along the northern and southwestern boundaries of the Chino Basin,

[5] See footnote 2, above.

with no fault zones traversing the valley areas in which much of the CBP infrastructure would be installed. While the potential for a well to be located in an Alquist-Priolo Fault Zone is minimal, because the precise locations for future wells are unknown at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed under this Project Category that would operate within these zones could expose structures to potential substantial adverse effects; therefore, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone, are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

As mentioned in Project Category 1, the Elsinore, Red Hill, and Sierra Madre Faults are each delineated as being located within Alquist-Priolo Earthquake Fault Zones. Underground pipelines are not typically susceptible to severe damage from fault rupture, depending on the severity of a seismic event. However, because not all proposed project locations are known at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Facilities operated within these zones could expose conveyance and ancillary facilities to potential substantial adverse effects; therefore, mitigation would be required to minimize impacts under this issue to a less than significant level by ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone, are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Project Category 3: Groundwater Storage Increase

This Project Category would include an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with being located within or near an active fault zone is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF would be installed at RP-4, which, as shown in Exhibits 11 and 12, is a site that has been mostly developed with minimal vegetation coverage. This site is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, the risk of the project exposing people or

structures to loss, injury, or death involving rupture of an active earthquake fault would be less than significant.

The proposed wellhead treatment facilities at or near existing well sites would occur at locations which are presently unknown. Because not all proposed project locations are determined at this time, there is the potential for projects to be constructed and operated within an Alquist-Priolo Fault Zone. Projects proposed as part of this Project Category within these zones could expose structures to potential substantial adverse effects; therefore, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that new facilities are located outside of delineated fault zones, or if located within a fault zone, are analyzed thoroughly through a site specific geotechnical report with specific design recommendations or through a second tier CEQA evaluation.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measure:

GEO-1: ***Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible a second tier CEQA evaluation shall be completed.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure (MM) **GEO-1** would ensure new facilities are located outside delineated fault zones, or otherwise minimize impacts if located within a fault zone.

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(ii) Strong seismic ground shaking?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active.

In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed wells and

monitoring devices. The proposed wells would be installed and are anticipated to each be housed within a small structure. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of the proposed wells. Therefore, structural and mechanical failure of facilities caused by seismic ground shaking could potentially threaten the safety of on-site workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers, Land Surveyors, and Geologists, provide the basis for regulating and enforcing engineering practice in California. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active.

In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the proposed conveyance and ancillary facilities. Underground pipelines are not typically susceptible to severe damage from seismic ground shaking, and furthermore are subject to industry standards that will minimize the potential risk of damage or pipeline rupture. However, the facilities proposed under this Project Category include ancillary facilities that may include aboveground structures. The primary and secondary effects of ground shaking could damage structural foundations, distort or break pipelines and other water conveyance structures, and cause structural failure.

The structural elements of conveyance and associated ancillary facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care required for projects in the San Bernardino County area. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799) and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provide the basis for regulating and enforcing engineering practice in California. In addition, the pipelines would be constructed according to industry standards using American Water Works Association (AWWA) guidelines. Compliance with these construction and building safety design standards would reduce potential impacts associated with ground shaking to a level of less than significant.

Project Category 3: Groundwater Storage Increase
This Project Category would include an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, there is no risk of expansion of the safe storage capacity directly or indirectly causing potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.

Project Category 4: AWPF and Other Water Treatment Facilities
This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

As addressed under issue a(i) above, the Chino Basin is located within a region that is seismically active. In the event of an earthquake in Southern California, some seismic ground shaking would likely be experienced in the project area sometime during the operational life of the new wellhead treatment facilities at or near well sites, and the proposed AWPF at RP-4. Ground shaking could result in structural damage to new facilities, which in turn could affect operation of related systems. Some of the proposed facilities are non-habitable or would only require visits on an as-needed basis; however, some facilities, such as the AWPF at RP-4 would require full time employees on site. Therefore, structural and mechanical failure of facilities onset by seismic ground shaking could potentially threaten the safety of on-site workers.

The structural elements of facilities proposed under this Project Category would undergo appropriate design-level geotechnical evaluations prior to final design and construction as required to comply with the CBC. Compliance with the construction and building safety design standards addressed under Project Category's 1 and 2 would reduce potential impacts associated with ground shaking to a level of less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(iii) Seismic-related ground failure, including liquefaction?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area

in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Based on the known liquefaction potential of parts of the Chino Basin, it is possible that any of the future wells could be located within an area with a potential for liquefaction. The proposed wells would be installed and are anticipated to each be housed within a small structure. As such, because the locations for future wells are unknown at this time, there is the potential for projects to be constructed and operated within an area with a high potential for liquefaction. The proposed wells located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, adverse effects involving liquefaction would be potentially significant. As such, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that new wells are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area with a high potential for liquefaction. As described in the Environmental Setting above, there are areas within the Chino Basin with a high potential for liquefaction. The pipelines and/or ancillary facilities located on or in soils with a moderate to high potential for liquefaction could experience damage or failure as a result of liquefaction. Therefore, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 3: Groundwater Storage Increase

This Project Category would include an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with liquefaction is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Upgrades and improvements to existing facilities, such as the proposed installation of an AWPF at RP-4, would occur within developed sites already containing wastewater treatment or other

IEUA or Member Agency facilities; the proposed AWPF at RP-4 would not be located on soils susceptible to liquefaction.

The proposed wellhead treatment facilities at or near existing well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be located on or in soils with a moderate to high potential for liquefaction, which may cause damage or failure as a result. Therefore, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measure: Refer to Mitigation Measure **GEO-1**, above.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-1** would reduce the potential impacts from liquefaction hazards through a design level geotechnical investigation with implementation of specific design recommendations.

a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
(iv) Landslides?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Landslides and mudflow hazards exist throughout the Chino Basin on steep hillsides and in creek and streambed areas. According to the San Bernardino Countywide Plan Liquefaction and Landslide Map (**Figure 4.8-2**), the majority of the potential for landslide exists at the Chino Hills in the southwestern portion of the Basin, and at the San Gabriel Mountains at the northern boundary of the Basin. While it is anticipated that, based on Exhibit 8 in the Project Description and Figures 6 through 9), the majority of the proposed wells would be located outside of the delineated landslide hazard zones, given that the locations of the proposed wells are presently unknown, it is possible that any of the future wells could be located within an area with a potential for landslide. As such, the proposed wells could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. As such, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that new wells are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in

size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Given that the locations of the proposed conveyance systems and ancillary facilities are presently unknown, it is possible that any of the conveyance systems and ancillary facilities could be located within an area susceptible to landslides. The proposed conveyance and ancillary facilities could experience damage or failure as a result of a landslide. Therefore, adverse effects involving landslide would be potentially significant. As such, mitigation would be required to minimize impacts under this issue to a less than significant level through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 3: Groundwater Storage Increase

This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no risk of loss, injury, or death associated with landslides is anticipated to occur as a result of this proposed safe storage capacity expansion.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Upgrades and improvements to existing facilities, such as the proposed installation of an AWPF at RP-4, would occur within developed sites already containing wastewater treatment or other IEUA or Member Agency facilities; the proposed AWPF at RP-4 is not located in an area susceptible to landslide.

The proposed wellhead treatment facilities at or near existing well sites would occur at locations which are presently unknown. As such, there is a potential for such facilities to be constructed in areas susceptible to landslides, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue to a less than significant level through ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Refer to Mitigation Measure **GEO-1**, above.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-1** would reduce the potential impacts from landslide hazards through a design level geotechnical investigation with implementation of specific design recommendations.

b. Would the project result in substantial soil erosion or the loss of topsoil?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction activities for proposed well development projects such as excavation and grading could result in soil erosion during rain or high wind events. Development of the proposed wells would result in construction activities that would need to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities that generate wind-induced soil erosion are below significance thresholds as this is a requirement intended to prevent significant wind-induced soil erosion. As a mandatory requirement, mitigation is not required to ensure compliance with the above Rule.

As stated in the project description, well development is anticipated to occur within sites that would disturb less than 0.5 acre, and as such no Storm Water Pollution Prevention Plan (SWPPP) would be required. However, in order to prevent erosion associated with runoff from construction sites for each proposed project, IEUA would abide by best management practices (BMPs) to ensure that the discharge of storm runoff from construction sites does not cause erosion downstream to the discharge point. The implementation of BMPs would be enforced through mitigation identified below. Additionally, for these well development projects, which are anticipated to be less than 0.5 acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (Santa Ana Regional Water Quality Control Board [SARWQCB], 2016) that includes each of the seven Cities within the Chino Basin as co-permittees, would include erosion and sediment control BMPs for the construction sites. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction activities for proposed conveyance and ancillary facility projects such as excavation and grading could result in soil erosion during rain or high wind events. As stated above, development of the proposed wells would result in construction activities that would need to comply with SCAQMD Rule 403 for dust control to ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure

that construction activities that generate wind-induced soil erosion are below significance thresholds.

To prevent erosion associated with runoff from construction sites for each individually proposed project, IEUA would be required to prepare and implement a SWPPP in accordance with the requirements of the statewide Construction General Permit (CGP) (State Water Resources Control Board [SWRCB] Water Quality Order 2009-0009-DWQ). The SWPPP would identify BMPs to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. Compliance with the CGP, required SWPPP, and identified BMPs would ensure soil erosion and loss of topsoil impacts would be reduced to a level of less than significant.

As stated above, should an individual proposed project result in disturbance of less than one acre during construction activities, then the CGP would not apply to the particular project. In order to prevent erosion associated with runoff from construction sites for each proposed project, IEUA would abide by BMPs to ensure that the discharge of storm runoff from construction sites would not cause erosion downstream to the discharge point. The implementation of BMPs would be enforced through mitigation identified below. Additionally, for conveyance and ancillary facility projects that are less than one acre in size, compliance with minimum BMPs, as specified by the San Bernardino County MS4 Permit (SARWQCB, 2016) that includes each of the seven Cities within the Chino Basin as co-permittees, would include erosion and sediment control BMPs for the construction site. Adherence to these conditions and the mitigation provided below would ensure that potential soil erosion and loss of topsoil impacts would be minimized to less than significant.

Project Category 3: Groundwater Storage Increase

This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no soil erosion or loss of topsoil are anticipated.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts related to soil erosion and the loss of topsoil from construction of the AWPF at RP-4 and wellhead treatment facilities are anticipated to be the same as those discussed under Project Categories 1, 2, and 3 above. With implementation of mitigation measure GEO-3 and compliance with applicable regulations this impact would be reduce to a less than significant level.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-2: ***For each well development or other CBP project that is less than one acre in size requiring ground disturbing activities such as grading, IEUA shall identify and implement best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

Level of Significance After Mitigation: Less Than Significant

The implementation of Mitigation Measure **GEO-2** would ensure that the proposed facilities associated with the CBP that are less than one acre in size would not exacerbate conditions related to erosion associated with runoff from construction sites through the implementation of BMPs.

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the proposed wells are presently unknown, it is possible that any of the future wells could be located within a site with unstable soils; furthermore, groundwater pumping facilities could cause aquifer system compaction and land subsidence, which is known to occur within the Chino Basin. However, the Technical Memorandum prepared by West Yost (provided as Appendix 4, Volume 2 to this DPEIR) indicates that under the proposed CBP, new land subsidence is projected to be minor and only occur in areas identified under the baseline scenario. As such, the proposed well development would not result in significant off-site subsidence, thus impacts would be less than significant.

The proposed wells may be located on or in unstable soils, and as such, could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of on-site or visiting employees. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue to a less than significant level through ensuring that new wells are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout

the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Soil instability from landslides, subsidence, lateral spreading, settlement, and slope failure can cause collapse of structures. Given that the locations of the conveyance and ancillary facilities are presently unknown, it is possible that any of the future conveyance and ancillary facilities could be located within a site with unstable soils. The proposed conveyance and ancillary facilities located on or in unstable soils could experience damage or failure as a result. Additionally, subsidence and collapse could damage the proposed facilities and affect the safety of on-site or visiting employees. Therefore, adverse effects involving unstable soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue to a less than significant level by ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 3: Groundwater Storage Increase

This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no impacts related to soil instability are anticipated to occur.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Non-seismically induced geologic hazards such as landslides, subsidence, lateral spreading, settlement, and slope failure can be caused by unstable soils, which occur within the Chino Basin area. Upgrades and improvements at existing facilities such as the proposed installation of the AWPF at RP-4, as well as the proposed wellhead treatment facilities may involve groundwater pumping facilities that could cause aquifer system compaction and land subsidence. However, the overall CBP facilities, when combined, would not cause significant subsidence in the basin, as described above. Construction and operation of the proposed facilities would not cause subsidence; rather, proposed facilities, though not anticipated to be affected by historical subsidence, could be exposed to future subsidence and collapse risk due to the circumstances known to exist within the treatment facility locations. As such, there is a potential for such facilities to be located on unstable soils, which may cause damage or failure as a result. Therefore, mitigation is required to minimize impacts under this issue to a less than significant level by ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to MM **GEO-1**, above.

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-1** would reduce the potential impacts related to unstable soils through a design level geotechnical investigation with implementation of specific design recommendations for future CBP projects.

d. Would the project be located on expansive soil, as defined in California Building Code Section 1803.5.3, creating substantial direct or indirect risks to life or property?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

When expansive soils swell, the change in volume can exert significant pressures on loads that are placed on them, such as loads resulting from structure foundations or underground utilities, and can result in structural distress and/or damage. Most of the Chino Basin is comprised of old alluvial fans and valley deposits, which vary in consistency. As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. The specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. Given that the precise locations of well development sites have not yet been determined, there is a potential that such facilities could be installed within a site containing expansive soils. The flow meters are small devices that would be located within surface water; as such the presence of expansive soils is not of a concern for these devices. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue to a less than significant level through ensuring that new wells are analyzed thoroughly through a site-specific geotechnical report with specific design recommendations.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Proposed pipelines would be installed belowground; soils with expansive characteristics could exert pressure on the pipelines during times of saturation, potentially threatening pipeline stability. Similar to Project Category 1 facilities, the foundation of the ancillary facilities could also be damaged by expansive soils. Identified soil types within the Chino Basin area do not have expansive soil characteristics since they do not have a large amount of clay (expansive soils are

typically of a clay type); however, specific sites could have undetected expansive characteristics. Therefore, adverse effects involving expansive soils would be potentially significant. As such, mitigation is required to minimize impacts under this issue to a less than significant level through ensuring that conveyance and ancillary facilities are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Project Category 3: Groundwater Storage Increase

This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no impacts related to expansive soils are anticipated to occur.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

As stated above, soils throughout the project area mainly consist of sandy loams that show little change with moisture variation, and thus do not typically exhibit expansive soil characteristics. Therefore, the project facilities would most likely be located in areas of low soil expansion potential. However, the specific soil properties of a site can vary on a small scale, and may include undetermined areas that exhibit expansive properties. The presence of expansive soils at the existing treatment facility sites could decrease the structural stability of the proposed project facilities, which could result in structural or operational failure of these facilities and or threaten the health and safety of on-site workers. Such impacts are considered potentially significant. Therefore, mitigation is required to minimize impacts to a less than significant level by ensuring that the treatment facilities under this Project Category are analyzed thoroughly through a site specific geotechnical report with specific design recommendations.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Refer to MM **GEO-1**, above.

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **GEO-1** would reduce the potential impacts related to expansive soils through a design level geotechnical investigation with implementation of specific design recommendations for future CBP projects.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
Implementation of proposed well development associated with the CBP would not require the use of septic systems. There is no planned use of on-site septic systems for the proposed CBP projects proposed under this Project Category. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 2: Conveyance Facilities and Ancillary Facilities
Implementation of proposed conveyance and ancillary facilities would not include facilities that would require the use of septic systems. The majority of facilities would be upgrades to existing infrastructure, wells, pipelines, and other water conveyance facilities that do not require septic systems. There is no planned use of on-site septic systems for the proposed project facilities. Therefore, no impact would occur related to soil suitability for septic systems.

Project Category 3: Groundwater Storage Increase
The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no impact would occur related to soil suitability for septic systems.

Project Category 4: AWPF and Other Water Treatment Facilities
Impacts would be the same as Project Categories 1 and 2.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None required.

Level of Significance After Mitigation: No Impact

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The General Plans for the cities and unincorporated portions within the Chino Basin indicate that some portions of the Chino Basin areas are highly sensitive for paleontological resources. Since the proposed project is at the programmatic level, specific locations for the proposed wells have not been have yet to be determined. As such, impacts to specific paleontological resources are speculative. Previously unknown and unrecorded paleontological resources may be unearthed during excavation and grading activities for individual projects. If previously unknown potentially unique paleontological resources are uncovered during excavation or construction, significant impacts could occur. Therefore, mitigation would be implemented that would require site specific studies to identify potentially significant paleontological resources. Additional studies that would identify management measures to minimize impacts to any paleontological resources found within

a CBP project site would ensure that impacts to paleontological resources are less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any ground disturbance beyond those facilities requiring ground disturbance associated with the CBP designed to support this expansion as discussed herein. As such, no paleontological resources would be impacted by implementing the increase in safe storage capacity.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as Project Category 1 and 2.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

GEO-3: ***For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources. Treatment of any discovered paleontological resources shall follow the phasing and corresponding actions identified under MM CUL-2.***

Level of Significance Before Mitigation: Less Than Significant

The implementation of Mitigation Measure **GEO-3** would require a site specific study to identify and mitigate impacts to potentially significant paleontological resources, which would minimize potential impacts to paleontological resources.

4.8.6 Mitigation Measures

To minimize future impacts related to geology and soils from project implementation, the following mitigation measures would be implemented. These measures would eliminate seismic, erosion, and soil stability related impacts as well as impacts related to the presence of significant paleontological resources that might occur as a result of project implementation.

GEO-1: ***Prior to construction of each improvement, a design-level geotechnical investigation, including collection of site specific subsurface data if appropriate, shall be completed. The geotechnical evaluation shall identify all potential seismic hazards including fault rupture, and characterize the soil profiles, including liquefaction potential, expansive soil potential, subsidence, and landslide potential. The geotechnical investigation shall recommend site specific design criteria to mitigate for seismic and non-seismic hazards, such as special foundations and structural setbacks, and these recommendations shall be incorporated into the design of individual proposed projects. If the project specific geotechnical study cannot mitigate potential seismic related impacts, then the facility shall be relocated. If relocation is not possible a second tier CEQA evaluation shall be completed.***

GEO-2: ***For each well development or other CBP project that is less than one acre in size requiring ground disturbing activities such as grading, IEUA shall identify and implement best management practices (BMPs, such as hay bales, wattles, detention basins, silt fences, coir rolls, etc.) to ensure that the discharge of the storm runoff from the construction site does not cause erosion downstream of the discharge point. If any substantial erosion or sedimentation occurs as a result of discharging storm water from a project construction site, any erosion or sedimentation damage shall be restored to pre-discharge conditions.***

GEO-3: ***For project-level development involving ground disturbance, a qualified paleontologist shall be retained to determine the necessity of conducting a study of the project area(s) based on the potential sensitivity of the project site for paleontological resources. If deemed necessary, the paleontologist shall conduct a paleontological resources inventory designed to identify potentially significant resources. The paleontological resources inventory would consist of: a paleontological resource records search to be conducted at the San Bernardino County Museum and/or other appropriate facilities; a field survey or monitoring where deemed appropriate by the paleontologist; and recordation of all identified paleontological resources. Treatment of any discovered paleontological resources shall follow the Phasing and corresponding actions identified under MM CUL-2.***

Implementation of these measures will reduce potential geology and soils impacts to a less than significant impact level.

4.8.7 Cumulative Impacts

Future cumulative development may experience significant impacts associated with geotechnical constraints within the Chino Basin, including impacting resources such as paleontological resources, that occur below ground. Similarly, Development of the CBP would be affected by geotechnical constraints within the Chino Basin. None of the future on-site or off-site project-related activities are forecast to cause changes in geology or soils or the constraints affecting the

project area that cannot be fully mitigated. Therefore, with the implementation of mitigation measures **GEO-1** through **GEO-3**, and adherence to the regulatory requirement, the proposed CBP would have a less than significant contribution to cumulatively considerable geology or soils impacts within the Basin.

4.8.8 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, no significant and unavoidable impacts relating to geology and soils would occur as a result of implementing the proposed project.

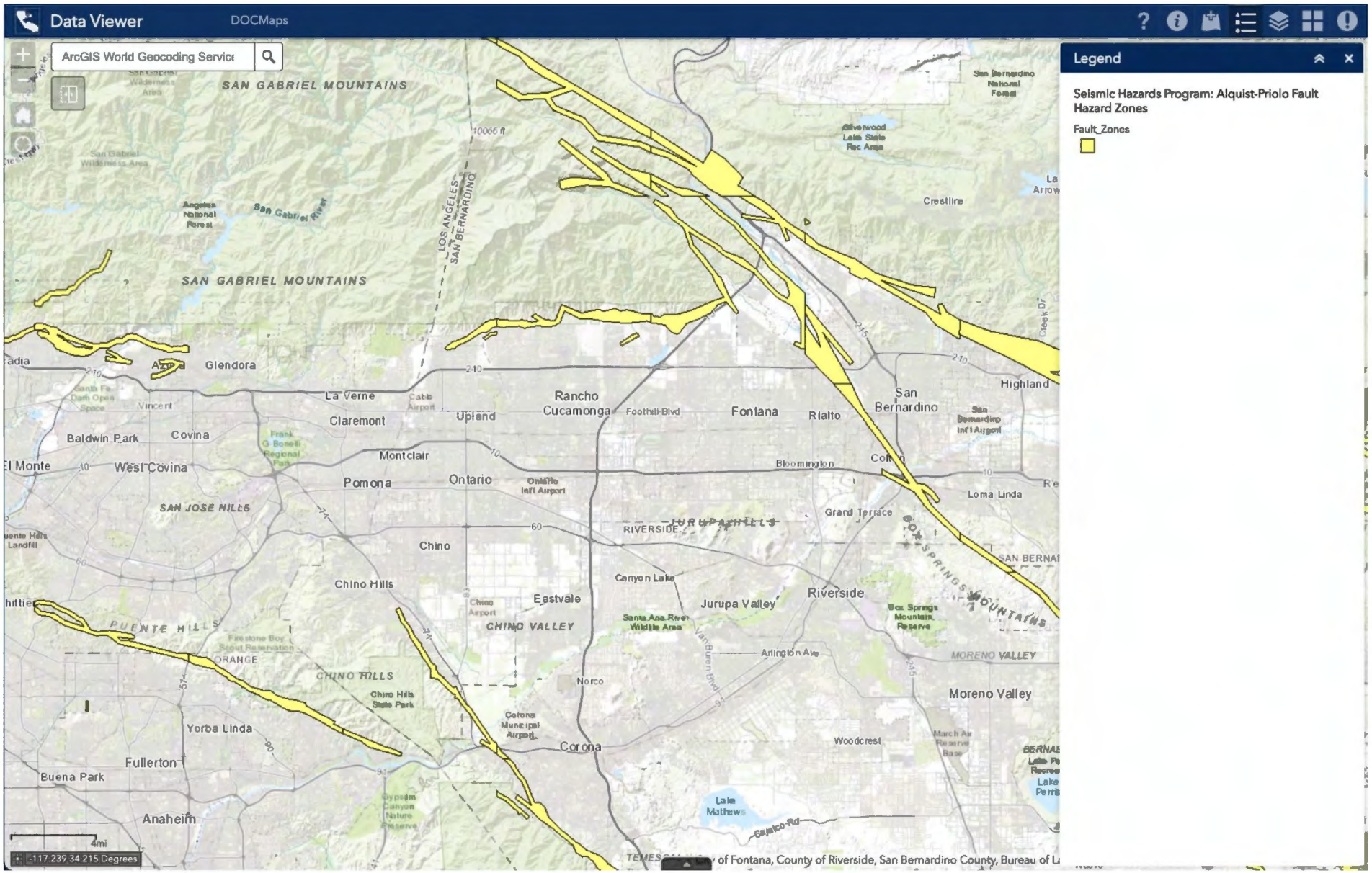

FIGURE 4.8-1

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Environmental Consultants

Earthquake Fault Zone Map

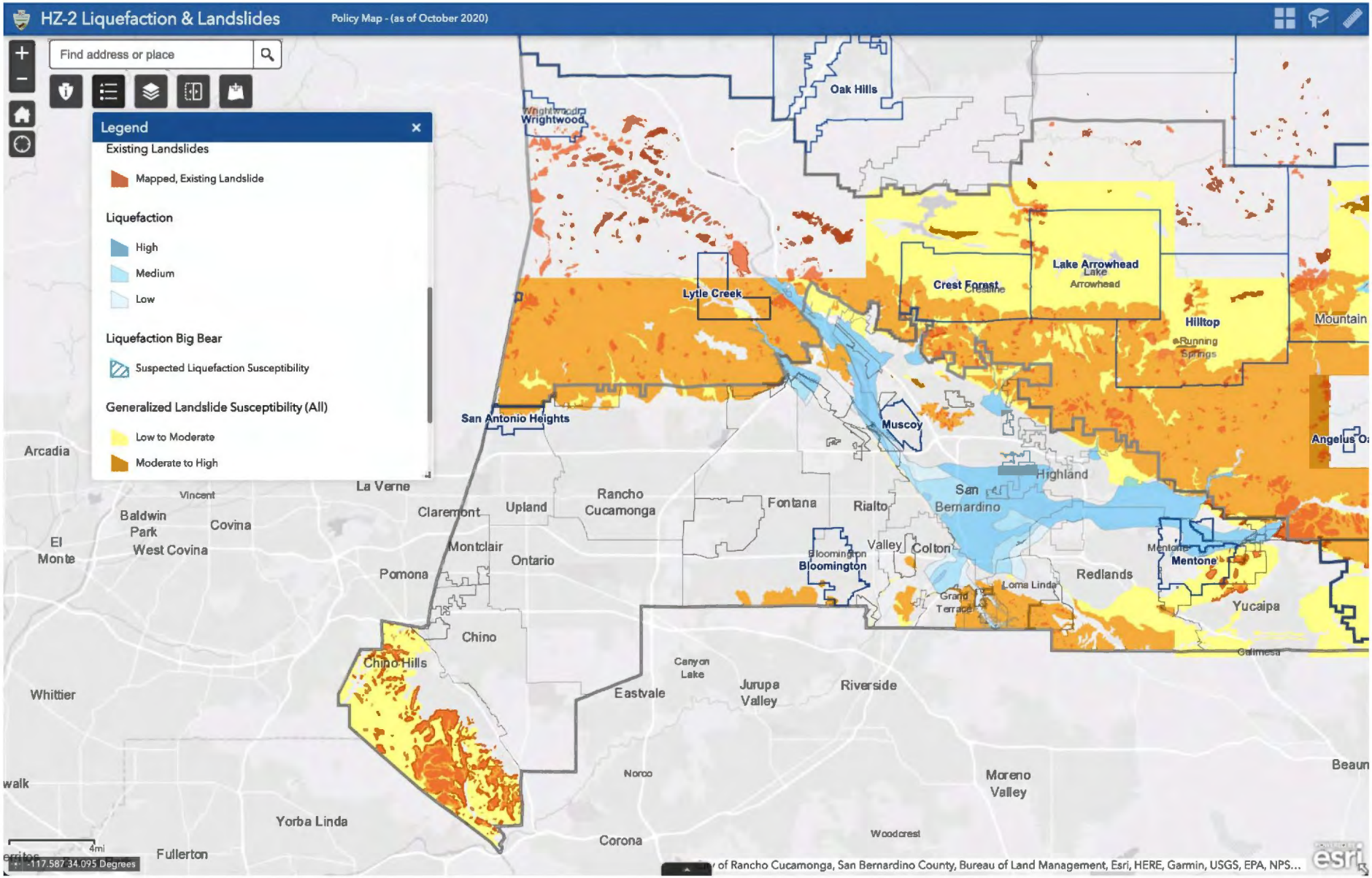

FIGURE 4.8-2

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Environmental Consultants

Liquefaction and Landslide Map

4.9 GREENHOUSE GASES / GLOBAL CLIMATE CHANGE

4.9.1 Introduction

This section assesses potential impacts to air quality from implementation of the Chino Basin Program (CBP). The *Inland Empire Utilities Agency Chino Basin Program Greenhouse Gas Technical Report* dated October 2021 was prepared by Woodard & Curran to evaluate the potential impacts related to greenhouse gas (GHG) emissions associated with construction and operation of the facilities proposed as part of the CBP. A copy of the Greenhouse Gas Technical Report is provided as Appendix 9 of Volume 2 to this DPEIR. Much of the information provided in the following sections is abstracted directly from this technical report with minor edits.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Greenhouse Gas Emissions
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

The following references were used in preparing this Subchapter of the EIR:

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- South Coast Air Quality Management District. 2021. "Frequently Asked Questions: What is CalEEMod and
what is it used for?" http://www.aqmd.gov/home/rules-compliance/ceqa/air-qualityanalysis-handbook/frequently-asked-questions (accessed October 2021
- State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).
- United States Energy Information Administration. 2021. "California State Energy Profile." February 18, 2021. https://www.eia.gov/state/print.php?sid=CA (accessed October 2021).
- United States Environmental Protection Agency. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. April 2021. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed September 2021).
- Verma, Ram, electronic communication. 2016. "GHG for SWP." May 13.
- World Meteorological Organization. 2013. A summary of current and climate change findings and figures: a WMO information note. March 2013. https://library.wmo.int/opac/index.php?lvl=notice_display&id=15892#.Wt9-Z8gvzIU (accessed September 2021).
  World Meteorological Organization. 2020. "Greenhouse Gases." https://public.wmo.int/en/our-mandate/focus-areas/environment/greenhouse%20gases (accessed September 2021).

No comments pertaining to noise were received at the Scoping Meeting held on behalf of the project. Two comment letters specific to this topic were received in response to the Notice of Preparation.

Comment Letter #4 from the South Coast Air Quality Management District (SCAQMD) (dated 10/12/21) states:

- *Staff recommends that the IEUA use South Coast AQMD's CEQA Air Quality Handbook and website as guidance when preparing the air quality and greenhouse gas analyses.*
- *It is also recommended that the IEUA use the CalEEMod land use emissions software*
- *In the event that the project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Several resources to assist the IEUA with identifying potential mitigation measures for the project include:*
  - *South Coast AQMD's CEQA Air Quality Handbook*
  - *South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan*
    Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy

Comment Letter #7 from the Orange County Water District (OCWD) (dated 10/14/21) states:

- *OCWD states that the EIR should analyze and quantify the greenhouse gas emissions by accounting for the CBP's impact on Southern California's total imported water needs.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

4.9.2 Environmental Setting: Greenhouse Gas Emissions

4.9.2.1 Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record, which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed a high degree of confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century.[1]

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and CH_4 results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6 (United States Environmental Protection Agency [U.S. EPA] 2020).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), which is the amount of GHG emitted multiplied by its

[1] IPCC. 2014. Climate Change 2014: Mitigation of Climate Change. Summary for Policymakers - Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 28, meaning its global warming effect is 28 times greater than CO_2 on a molecule per molecule basis.[2, 3]

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler.[4] However, since 1750, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased by 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity.[5] GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

4.9.2.2 Greenhouse Gas Emissions Inventory

Global Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 49,000 million metric tons (MMT) of CO_2e in 2010. Carbon dioxide emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO_2 was the most abundant, accounting for over 75 percent of total 2010 emissions. Methane emissions accounted for 16 percent, while N_2O and fluorinated gases accounted for 6 percent and 2 percent respectively.[6]

United States Emissions Inventory

Total United States (U.S.) GHG emissions were 6,558 MMT of CO_2e in 2019. Emissions decreased by 1.7 percent from 2018 to 2019; since 1990, total U.S. emissions have increased by an average annual rate of 0.06 percent for a total increase of 1.8 percent between 1990 and 2019. The decrease from 2018 to 2019 reflects the combined influences of several long-term trends, including population changes, economic growth, energy market shifts, technological changes such as improvements in energy efficiency, and decrease carbon intensity of energy fuel choices.

[2] The IPCC's (2021) *Sixth Assessment Report* determined that methane has a GWP of 30. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2020.4.0, which uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*. (IPCC. 2007. Summary for Policymakers. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.)
[3] IPCC. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (accessed September 2021).
[4] World Meteorological Organization. 2020. "Greenhouse Gases." https://public.wmo.int/en/our-mandate/focus-areas/environment/greenhouse%20gases (accessed September 2021).
[5] Forster, P., V. Ramaswamy, P. Artaxo, T. Berntsen, R. Betts, D.W. Fahey, J. Haywood, J. Lean, D.C. Lowe, G. Myhre, J. Nganga, R. Prinn, G. Raga, M. Schulz and R. Van Dorland. 2007. Changes in Atmospheric Constituents and in Radiative Forcing. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-chapter2-1.pdf (accessed September 2021).
[6] IPCC. 2014. Climate Change 2014: Mitigation of Climate Change. Summary for Policymakers - Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

In 2019, the industrial and transportation end-use sectors accounted for 30 percent and 29 percent, respectively, of nationwide GHG emissions while the commercial and residential end-use sectors accounted for 16 percent and 15 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors.[7]

California Emissions Inventory

Based on the California Air Resource Board's (CARB) California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019. The major source of GHG emissions in California is the transportation sector, which comprises 40 percent of the State's total GHG emissions. The industrial sector is the second largest source, comprising 21 percent of the State's GHG emissions while electric power accounts for approximately 14 percent.[8] The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate, which reduces energy consumption for heating and cooling as compared to other states with more extreme weather variations.[9] In 2016, through implementation of stringent GHG emission reduction policies (see further discussion in **Section 4.6.2, Regulatory Setting**), the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO_2e.[10] The annual 2030 statewide target emissions level is 260 MMT of CO_2e.[11]

4.9.2.3 Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) from 2011 to 2020 was approximately 0.82°C higher than the average GMST for the 20th century.[12] Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global

[7] U.S. EPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. April 2021. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019 (accessed September 2021).
[8] CARB. 2021. "California Greenhouse Gas Emissions for 2000 to 2019 Trends of Emissions and Other Indicators." https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed September 2021).
[9] United States Energy Information Administration. 2021. "California State Energy Profile." February 18, 2021. https://www.eia.gov/state/print.php?sid=CA (accessed October 2021).
[10] CARB. 2021. "California Greenhouse Gas Emissions for 2000 to 2019 Trends of Emissions and Other Indicators." https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed September 2021).
[11] CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed September 2021).
[12] National Oceanic and Atmospheric Administration. 2021. "Global Climate Report for Annual 2020." State of the Climate. January 2021. https://www.ncdc.noaa.gov/sotc/global/202013 (accessed September 2021).

warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC, 2018).[13, 14]

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years. In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the State and regionally-specific climate change case studies.[15] However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Scientists project that the annual average maximum daily temperatures in California could rise by 2.5 to 5.8°F in the next 50 years and by 5.6 to 8.8°F in the next century.[16] Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain (see **Subchapter 4.4, Air Quality**, for a discussion of the health and environmental effects of ozone pollution). In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the State has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains. In Southern California, the average size of summertime non-Santa Ana based fires has significantly increased from 1,129 hectares in the 1960s to 2,121 hectares in the 2000s.[17] If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the State. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, which would effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them.[18]

Water Supply

Analysis of paleoclimatic data (such as tree-ring-based reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California

[13] IPCC. 2014. Climate Change 2014: Mitigation of Climate Change. Summary for Policymakers - Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
[14] IPCC. 2018. Summary for Policymakers. In: Global warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. https://www.ipcc.ch/sr15/ (accessed September 2021).
[15] State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).
[16] Ibid.
[17] Ibid.
[18] California Natural Resources Agency. 2009. 2009 California Climate Adaptation Strategy. March 2009. http://resources.ca.gov/docs/climate/Statewide_Adaptation_Strategy.pdf (accessed September 2021).

and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common.[19] The uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the Central and Southern California coasts.[20] The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the proportion of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack. Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in Central and Northern California will decline by approximately 66 percent from its historical average by 2050.[21]

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding. The number of atmospheric rivers (regions of high water vapor transport from the tropics to the Pacific Coast that produce intense topographic-induced precipitation along southern California mountain ranges) is expected to increase in the future, resulting in an extended flood hazard season.[22] Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from coastal flooding. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.6 millimeters per year, more than double the twentieth century trend of 1.6 millimeters per year.[23, 24] Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise of 0.25 to 0.94 meter by 2100 (IPCC 2018). A rise in sea levels could erode 31 to 67 percent of Southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure. Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.[25]

[19] California Department of Water Resources. 2018. Indicators of Climate Change in California. May 2018. https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf (accessed September 2021).
[20] State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).
[21] Ibid.
[22] Ibid.
[23] National Aeronautics and Space Administration. 2021. "Global Climate Change – Vital Signs of the Planet – Sea Level." https://climate.nasa.gov/vital-signs/sea-level/ (accessed September 2021).
[24] World Meteorological Organization. 2013. A summary of current and climate change findings and figures: a WMO information note. March 2013. https://library.wmo.int/opac/index.php?lvl=notice_display&id=15892#.Wt9-Z8gvzIU (accessed September 2021).
[25] State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).

Agriculture

California has an over $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts.[26] Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks.[27] Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality.[28]

Ecosystems and Wildlife

Climate change and the potential resultant changes in weather patterns could have ecological effects on global and local scales. Soil moisture is likely to decline in many regions as a result of higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage.[29, 30]

4.9.3 Regulatory Setting

The following regulations are applicable to greenhouse gas emissions.

4.9.3.1 International

IPCC

In 1988, the United Nations (U.N.) and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nation's Framework Convention on Climate Change (Convention)

On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

[26] California Department of Food and Agriculture. 2021. "California Agricultural Statistics Review 2019-2020." https://www.cdfa.ca.gov/statistics/ (accessed September 2021).
[27] State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).
[28] California Climate Change Center. 2006. Climate Scenarios for California.
[29] Parmesan, C. August 2006. Ecological and Evolutionary Responses to Recent Climate Change.
[30] State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed September 2021).

International Climate Change Treaties

The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of 5% against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius (°C) above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the U.N. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2°C, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;

- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a).

On November 4, 2019, the Trump administration formally notified the U.N. that the United States would withdraw from the Paris Agreement. It should be noted that withdrawal would be effective one year after notification in 2020.

4.9.3.2 Federal

The following subsections summarize the main federal and State regulations applicable to GHG emissions. Details on other federal and State GHG regulations can be found in Section 3.1 of the Greenhouse Gas Technical Report contained in Appendix 9 of Volume 2 to this DPEIR.

Federal Clean Air Act

The U.S. Supreme Court determined in *Massachusetts et al. v. Environmental Protection Agency et al.* 549 U.S. 497, 127 S. Ct. 1438 [2007]) that the U.S. EPA has the authority to regulate motor vehicle GHG emissions under the Federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that established the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In *Utility Air Regulatory Group v. Environmental Protection Agency* (537 U.S. 392, 134 S. Ct. 2427 [2014]), the U.S. Supreme Court held the U.S. EPA may not determine whether a source can be considered a major source required to obtain a Prevention of Significant Deterioration or Title V permit under the Federal Clean Air Act based on the level of GHG emissions generated by the source. The Court also held that Prevention of Significant Deterioration permits otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the U.S. E.PA and the National Highway Traffic Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The SAFE Rule Part One revokes California's authority to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates. On April 30, 2020, the U.S. E.PA and the National Highway Traffic Safety Administration published Part Two of the SAFE Vehicles

Rule, which revised corporate average fuel economy and CO_2 emissions standards for passenger cars and trucks of model years 2021 to 2026 such that the standards increase by approximately 1.5 percent each year through model year 2026 as compared to the approximately five percent annual increase required under the 2012 standards.[31] To account for the effects of the SAFE Vehicles Rule, CARB released off-model adjustment factors on June 26, 2020 to adjust GHG emissions outputs from the EMFAC model.[32]

4.9.3.3 State

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. There are numerous regulations aimed at reducing the State's GHG emissions. These initiatives are summarized below. For more information on the Senate and Assembly Bills, executive orders, building codes, and reports discussed below, and to view reports and research referenced below, please refer to the following websites: https://www.energy.ca.gov/data-reports/reports/californias-fourth-climate-change-assessment, www.arb.ca.gov/cc/cc.htm, and https://www.dgs.ca.gov/BSC/Codes.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allowed California to implement more stringent vehicle emission standards than those promulgated by the U.S. EPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs and would provide major reductions in GHG emissions. By 2025, the rules will be fully implemented, and new automobiles will emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels.[33] However, as a result of the Federal SAFE Vehicles Rule discussed above, California's waiver of Clean Air Act preemption was revoked, thereby rescinding the CARB's authority to implement the Advanced Clean Cars program.

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The "California Global Warming Solutions Act of 2006," (AB 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHG emissions to meet the 2020 deadline. In

[31] National Highway Traffic Safety Administration. 2020. "Fact Sheet: SAFE Vehicles Rule." https://www.nhtsa.gov/corporate-average-fuel-economy/safe-fact-sheet (accessed September 2021).
[32] CARB. 2020. EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO2) Emissions to Account for the SAFE Vehicles Rule Part One and the Final SAFE Rule. June 26, 2020. https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf?utm_medium=email&utm_source=govdelivery (accessed September 2021).
[33] CARB. 2011. Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles. December 7, 2011. http://www.arb.ca.gov/regact/2012/leviiighg2012/levisor.pdf (accessed September 2021).

addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO_2e, which was achieved in 2016. The CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others.[34] Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval. The CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.[35]

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with statewide per capita goals of six metric tons (MT) of CO_2e by 2030 and two MT of CO_2e by 2050. As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the State.[36]

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), approved by the governor on September 30, 2008, and effective January 1, 2009, enhances the State's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") can receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Southern California Association of Governments (SCAG) was

[34] CARB. 2008. Climate Change Scoping Plan. Sacramento, CA. December 2008. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2008-scoping-plan-documents (accessed September 2021).
[35] CARB. 2014. AB 32 Scoping Plan Website. Updated June 2014. http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm (accessed September 2021).
[36] CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed September 2021).

assigned targets of an 8 percent reduction in per capita GHG emissions from passenger vehicles by 2020 and a 19 percent reduction in per capita GHG emissions from passenger vehicles by 2035. In the SCAG region, SB 375 also provides the option for the coordinated development of subregional plans by the subregional councils of governments and the county transportation commissions to meet SB 375 requirements. On September 3, 2020, the SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS entitled Connect SoCal, which meets the requirements of SB 375.

Senate Bill 1383

Adopted in September 2016, SB 1383 (Lara, Chapter 395, Statues of 2016) requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

As a result, the CARB adopted the Short-Lived Climate Pollutant Reduction Strategy in 2017 and has initiated implementation. SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills. CalRecycle has initiated the rulemaking process for these regulations with the proposed regulation text submitted to the Office of Administrative Law in October 2020.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, former Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Building Standards Code

Title 24 of the California Code of Regulations (CCR) is referred to as the California Building Standards Code. It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. The current iteration is the 2019 Title 24 standards. The California Building Standards Code's energy-efficiency and green building standards are outlined below.

Part 6 – Building Energy Efficiency Standards/Energy Code

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC).

Part 11 – California Green Building Standards

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 California Building Standards Code). The 2019 CALGreen includes mandatory minimum environmental performance standards for all ground-up new construction of residential and non-residential structures. It also includes voluntary tiers (Tiers I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;[37]
- 65 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of electric vehicle (EV) charging stations in newly constructed attached garages for single-family and duplex dwellings ("EV ready"); and
- Designation of at least ten percent of parking spaces for multi-family residential developments as electric vehicle charging spaces capable of supporting future electric vehicle supply equipment ("EV capable").

The voluntary standards require:

- **Tier I:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste with third-party verification, 10 percent recycled content for building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof; and
- **Tier II:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste with third-party verification, 15 percent recycled content for building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar reflective roof.

California Integrated Waste Management Act (Assembly Bill 341)

The California Integrated Waste Management Act of 1989, as modified by AB 341 in 2011, requires each jurisdiction's source reduction and recycling element to include an implementation

[37] Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water-reduction requirements must be demonstrated through completion of water use reporting forms. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified by CALGreen or a reduced per-plumbing-fixture water use rate.

schedule that shows: (1) diversion of 25 percent of all solid waste by January 1, 1995 through source reduction, recycling, and composting activities and (2) diversion of 50 percent of all solid waste on and after January 1, 2000.

4.9.3.4 Regional

SCAQMD

The Chino Basin lies within the jurisdiction of the SCAQMD. On December 5, 2008, the SCAQMD Board approved interim CEQA GHG significance thresholds for stationary sources, rules, and plans using a tiered approach for determining significance. No additional guidance has been issued since the release of this interim guidance in 2008. Although the SCAQMD Board has not since approved the thresholds as a permanent rule, they can serve as useful guidance for lead agencies as they set their own significance thresholds. The thresholds are structured in tiers, which are summarized below:

- Tier 1 consists of evaluating whether or not the project qualifies for an applicable exemption under CEQA. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, it would move to Tier 2.
- Tier 2 consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan or climate action plan. The GHG reduction plan must meet the minimum requirements further detailed in the interim guidance, which include compliance with AB 32 GHG reduction goals, analysis under CEQA, inclusion of GHG inventory tracking and monitoring provisions, and others. If the project is consistent with the qualifying local GHG reduction plan, project impacts related to GHG emissions are not significant. If the project is not consistent with a local GHG reduction plan, if there is no approved local GHG reduction plan, or if the local GHG reduction plan does not include all of the required components, the project would move to Tier 3.
- Tier 3 establishes screening significance thresholds and is the primary tier the SCAQMD Board uses for determining the significance of project impacts related to GHG emissions when it is the lead agency. The SCAQMD has set a screening significance threshold of 10,000 MT of CO_2e per year for determining whether a stationary source project would have a less-than-significant cumulative GHG impact. The threshold recommended for new residential or commercial projects is 3,000 MT of CO_2e per year.
- Tier 4 provides three compliance options for the lead agency based on performance standards. These include: reducing Business-As-Usual (BAU) emissions by a certain percentage, which is currently undefined; achieving early compliance with AB 32 through early implementation of CARB's Scoping Plan Measures; and establishing sector-based performance standards. If the performance standards or the compliance options in Tier 4 cannot be achieved, a project's GHG emissions would be considered significant.
- Tier 5 includes off-site mitigation to reduce a project's GHG emissions to below the applicable screening threshold.[38]

If the project includes stationary sources of emissions (such as emergency backup generators), SCAQMD permits may be required for construction and operation. Permitted equipment would be subject to applicable SCAQMD rules and regulations. SCAQMD Regulation XXVII addresses climate change with the following rules:

[38] SCAQMD. 2008. "Board Meeting Agenda No. 31: Interim CEQA Greenhouse Gas (GHG) Significance Threshold." October. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed September 2021).

- Rule 2700 provides definitions of key terms and background information on global warming potential of various gases.
- Rule 2701 establishes the SoCal Climate Solutions Exchange, a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG reductions within SCAQMD's jurisdiction.
- Rule 2702 establishes a GHG Reduction Program under which SCAQMD funds projects through contracts in response to requests for proposals or purchase reductions from other parties.

California Department of Water Resources Climate Action Plan

The Climate Action Plan is the California Department of Water Resources' (DWR) guide to addressing climate change in the programs, projects, and activities over which it has authority. The Climate Action Plan is divided into three phases to address mitigation, adaptation, and consistency in the analysis of climate change. Phase I is the GHG Emissions Reduction Plan, which lays out DWR's GHG emissions reduction goals for the near-term (present to 2030) and long-term (2030 to 2045). Phase II is the Climate Change Analysis Guidance, which develops a framework and guidance for consistent incorporation and alignment of the analysis of climate change impacts in DWR's project and program planning activities. Phase III, the Climate Change Vulnerability Assessment, describes, evaluates, and quantifies the vulnerabilities of DWR's assets in business to potential climate change impacts. Phase III also includes an Adaptation Plan to help prioritize resiliency efforts. DWR's GHG emission reduction targets are consistent with State targets, and the near-term goal is to reduce GHG emissions to at least 60 percent below 1990 levels by 2030. The long-term goals for 2045 are to supply 100 percent of electricity load with zero-carbon resources and achieve carbon neutrality.

DWR's Phase I GHG Emissions Reduction Plan sets construction emissions thresholds to distinguish between typical construction projects and "extraordinary construction projects." Typical construction projects can rely on the Climate Action Plan for streamlined CEQA review. Extraordinary construction projects are not eligible for streamlined review if the project emits more than 25,000 MT of CO_2e in total during the construction phase of the project, or if the project emits more than 12,500 MT of CO_2e in any single year of construction. These thresholds represent the level of GHG emissions that, by themselves, could potentially adversely affect DWR's ability to achieve its GHG emissions reduction goals. DWR notes that these construction emissions thresholds are not established as thresholds of significance for CEQA purposes and should not be considered to constitute a determination by DWR that these thresholds are generally applicable as thresholds of significance for CEQA purposes. To demonstrate consistency with DWR's Climate Action Plan, projects must complete a series of steps, including quantifying GHG emissions from the project using DWR internal guidance, incorporating all project-level GHG emissions reduction measures listed in Chapter VI of the Climate Action Plan (or explaining why measures that have not been incorporated do not apply to the project), determining that the project does not conflict with DWR's ability to implement any of the specific project-level GHG emissions reduction measures listed in Chapter VI, and obtaining additional review if the project would increase energy demands of the State Water Project (SWP) system by 15 gigawatts per year or more. Required project-level GHG emissions reduction measures focus on implementation of best management practices and compliance with existing regulations. The reduction measures aim to reduce GHG emissions from construction projects by minimizing fuel use by construction

equipment, reducing fuel consumption for transportation of construction materials, reducing the amount of landfill material, and reducing emissions from the production of cement.[39]

4.9.3.5 Local

IEUA has voluntarily reported and verified its GHG emissions since 2013 and adopted a Climate Change Action Plan (CCAP) in 2019, which sets GHG emission reduction goals. IEUA aims to balance regional sustainability efforts with environmentally conscious energy management strategies to identify projects and objectives that holistically address climate change efforts. The CCAP's GHG reduction goals are listed below:

- Reduce GHGs to AB 32 Levels: IEUA will follow AB 32 standards using the oldest emission baseline data available to reduce GHG levels to 2007 levels by 2020, 40 percent below 2007 levels by 2030, and 80 percent below 2007 levels by 2050.
- Strive toward Carbon Neutrality: IEUA's current renewable portfolio is capable of meeting approximately 50 percent of the agency-wide power needs. Increasing this capacity will reduce IEUA's impact on climate change and enhance environmental sustainability.
- Report GHG Emissions: IEUA will continue to report GHG emissions across all facilities to The Climate Registry. Rather than focusing on lowering IEUA's direct GHG emissions, potential projects will be evaluated on their potential to reduce global GHG emissions.
- Increase Energy Efficiency: Optimizing facility processes and retrofitting equipment can result in less power demand on the electrical grid.
- Reduce Methane Emissions: IEUA will strive toward optimizing resource recovery by pursuing projects that beneficially use the methane generated in the digestion process as a renewable source of heat and/or power generation.
- Renewable Energy Credits: In the event where meeting an 80 percent reduction by 2050 is not possible from the utilization of renewable resources, IEUA plans to purchase renewable energy credits.

The CCAP also establishes goals and objectives to guide development of future projects. IEUA has identified key areas that should be addressed to create a resilient water and wastewater management system that also contributes to GHG emission reductions. These goals and objectives are listed below:

- Goal: Maximize recycled water production and usage.
    - Objective: Expand infrastructure at IEUA sites, within the region, or surrounding areas to enhance capabilities for end user application, storage, or groundwater replenishment of recycled water.
    - Objective: Upgrade and/or modernize facilities to ensure effective water treatment and continued compliance with all regulatory requirements.
- Goal: Maintain health of the groundwater aquifer.
    - Objective: Improve stormwater capture through improvements to the groundwater replenishment system infrastructure.
    - Objective: Enhance groundwater replenishment capabilities within the Chino Basin through infrastructure upgrades.
    - Objective: Treat groundwater effectively to remove harmful contaminants and ensure a healthy aquifer.
    - Objective: Protect the groundwater quality by properly maintaining and upgrading infrastructure to prevent system failures that may contaminate the groundwater.

[39] DWR. 2020. "Climate Action Plan." https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan (accessed October 2021).

  - Objective: Enhance storage capabilities of storm, recycled, or imported water through expansion of existing infrastructure or collaboration with surrounding water systems.
- Goal: Maximize system efficiencies.
  - Objective: Improve energy efficiencies at IEUA facilities.
  - Objective: Develop water use efficiency and/or conservation programs within the region.
  - Objective: Strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources
- Goal: Measure performance.
  - Objective: Report GHG emissions annually through The Climate Registry.
  - Objective: Track key performance indicators for recycled, storm, and imported water usage within IEUA's management system.

The CCAP does not include thresholds of significance for GHG emissions from IEUA's projects or establish mechanisms for the review of GHG emissions of specific projects.[40]

4.9.4 Thresholds of Significance

According to Appendix G, Section XIII, of the CEQA Guidelines, a project would have a significant effect related to GHG emissions if the project would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

4.9.4.1 Construction

IEUA has not developed numerical thresholds based on a baseline GHG inventory that can be used to evaluate whether construction emissions associated with buildout of the CBP would conflict with achieving the statewide 2030 goal of reducing GHG emissions by 40 percent below 1990 levels. As discussed in **Section 4.9.3.3, Regulatory Setting: Regional**, the SCAQMD published interim CEQA GHG significance thresholds for stationary sources in 2008 and set a screening significance threshold of 10,000 MT of CO_2e per year for determining whether a stationary source project would have a less than significant cumulative GHG impact.[41] However, this threshold was adopted before the statewide 2030 GHG reduction targets were set and is intended to evaluate whether a project would be consistent with the 2020 target of reducing statewide GHG emissions to 1990 levels by 2020. The SCAQMD has not yet proposed or adopted thresholds for GHG reduction targets beyond 2020. Therefore, to determine whether emissions from construction of CBP facilities would hinder the GHG emission reductions required on a statewide basis to achieve the 2030 target, this analysis utilizes an approximated SCAQMD screening threshold for 2030. An annual GHG emission level of 6,000 MT of CO_2e would be 40 percent lower than the 10,000 MT of CO_2e threshold that the SCAQMD previously set to evaluate a project's consistency with reducing statewide GHG emissions to 1990 levels. This threshold is

[40] IEUA. 2019. *Climate Change Action Plan.* https://18x37n2ovtbb3434n48jhbs1-wpengine.netdna-ssl.com/wp-content/uploads/2019/01/2019-IEUA-Climate-Change-Action-Plan-with-Appendices.pdf (accessed October 2021).
[41] SCAQMD. 2008. "Board Meeting Agenda No. 31: Interim CEQA Greenhouse Gas (GHG) Significance Threshold." October. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2 (accessed September 2021).

utilized to evaluate the significance of construction-related emissions associated with buildout of the CBP.

4.9.4.2 Operation

For the purposes of analyzing operational impacts, the proposed CBP would have a significant impact if it would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment by not meeting its fair share of GHG reductions required on a statewide basis by 2030 or by failing to procure its electricity from carbon-neutral electricity sources by 2045.

4.9.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP related to GHG emissions.

4.9.5.1 Methodology

Construction

GHG emissions from construction of individual projects under the CBP were estimated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0, consistent with guidance from the SCAQMD. [42] In July 2021, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of CalEEMod version 2020.4.0, which incorporates the latest vehicle emissions standards, construction fleet mix standards, and other applicable regulations. This model has been used to calculate construction-source GHG emissions from on-site and off-site (i.e., mobile) sources.

Model inputs were developed based on information in **Chapter 3, Project Description**, and default values from the CalEEMod computer program. CalEEMod requires the selection of a land use type, but has limited choices for them (e.g., residential, commercial, industrial, educational, recreational, retail, and parking). The selection of "Industrial - Refrigerated Warehouse, No Rail" as a land use type for the AWPF, wells, pump stations, and wellhead treatment facilities allows for project-specific entries for energy use, construction equipment, and construction vehicle trips. The selection of "Parking - Other Asphalt Surfaces" for the pipelines and turnouts allows for project-specific entries on demolition, construction equipment, construction vehicle trips, and resurfacing and does not have model default operational energy usage or ongoing vehicle trips. The selection of "Industrial - Unrefrigerated Warehouse, No Rail" for the storage tank allows for project-specific entries for construction equipment and vehicle trips, site grading, and facilities construction without model default operational energy usage or ongoing vehicle trips. It was assumed that construction of all individual projects under the CBP would commence in 2025 and would proceed through the start of operations of the AWPF in 2028. It was also assumed individual projects implemented under the CBP would incorporate construction best management practices that are required by State law, such as compliance with the State's Portable Equipment Registration Program, CARB's Regulation for In-Use Off-Road Diesel Vehicles, CARB's Regulation of In-Use (On-Road) Heavy-Duty Diesel-Fueled Vehicles, and Title 13 California Code of Regulations Section 2449(d)(3) and Section 2485. Outputs from the model runs are provided

[42] SCAQMD. 2021. "Frequently Asked Questions: What is CalEEMod and what is it used for?" http://www.aqmd.gov/home/rules-compliance/ceqa/air-qualityanalysis-handbook/frequently-asked-questions (accessed October 2021).

in Attachment A of the Greenhouse Gas Technical Report included as Appendix 9 of Volume 2 to this DPEIR.

Operation

Operational GHG emissions associated with the CBP were estimated based on energy consumption estimates from similar projects in Southern California. Based on these similar projects, it was assumed individual projects implemented under the proposed CBP would consume the following quantities of energy each year for operation:[43, 44]

- Injection well: 5 kilowatt-hours (kWh) per AF per well
- Extraction well: 100 kWh per AF per well
- AWPF: 1,665 kWh per AF
- Pump station: 600 kWh per AF
- Wellhead Treatment Facilities: 10 kWh per AF
- Brine treatment and disposal: 625 kWh per AF

A portion of the electricity demand of the AWPF (the most energy-consuming component of the CBP) may be supplied from existing on-site renewable energy sources at RP-4, such as the one-megawatt (MW) wind turbine and the 1.5-MW battery. However, for the purposes of this analysis, it was conservatively assumed that energy demands would be fully met by electricity supplied by Southern California Edison (SCE).[45] SCE has achieved a 38 percent renewable portfolio and is on track to achieve 60 percent renewables by 2030.[46] SCE's current carbon intensity factor is 390.983 pounds of CO_2 per megawatt-hour (MWh), 0.033 pounds of nitrous oxide per MWh, and 0.004 pounds of methane per MWh, which equates to approximately 0.178 MT of CO_2e per MWh.[47] This carbon intensity factor for electricity was used to estimate GHG emissions from operation of CBP facilities and is considered conservative given the downward trend in carbon intensity of electricity in California.

Projects implemented under the CBP are expected to be operational in 2028. At that time, the CBP would provide up to 50,000 acre-feet per year (AFY) of advanced treated water to Metropolitan in dry or critically dry years. In return, up to 50,000 AFY of SWP water that would otherwise have been exported would be stored in Lake Oroville and used to enhance instream flows in the Feather River. By precluding the need for the export of 50,000 AF of SWP water, the CBP would result in energy savings and an associated reduction in indirect GHG emissions in each year this occurs. The amount of electricity required to supply, treat, and distribute water in Southern California is approximately 11.111 MWh per million gallons, or 3.612 MWh per acre-foot (AF).[48] The GHG emissions from the SWP are approximately 0.15 MT of CO_2e per megawatt-

[43] Carpinteria Valley Water District (CVWD). 2019. "Carpinteria Advanced Purification Project Environmental Impact Report." July.
[44] Sanchez, Carolina, electronic communication. 2020. "Energy information for Aquifer Storage and Recovery wells." January 10.
[45] CBP facilities would not require natural gas consumption.
[46] California Public Utilities Commission. 2020. "2020 California Renewables Portfolio Standard: Annual Report." November. https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/2020-rps-annual-report.pdf (accessed October 2021).
[47] CAPCOA. 2021. California Emissions Estimator Model User's Guide version 2020.4.0. May 2021.
[48] CAPCOA. 2010. "Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures." August. https://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/quantifying-greenhouse-gas-mitigation-measures.pdf?sfvrsn=0 (accessed October 2021).

hour (MWh).[49] Thus, in years when the proposed CBP precludes the import of 50,000 AF of SWP water, it would avoid the generation of approximately 27,154 MT of CO_2e associated with operation of the SWP.

Impact Analysis

a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction of individual projects under the CBP would generate GHG emissions associated with operation of off-road construction equipment, worker and vendor vehicle trips, and truck hauling trips. Estimated annual construction-related GHG emissions are summarized in **Table 4.9-1**. As shown therein, construction activities associated with buildout of the CBP would generate approximately 16,906 MT of CO_2e in total, or approximately 5,635 MT of CO_2e per year on average over the approximately three-year construction period. Average annual GHG emissions in each year of construction of the CBP between 2025 and 2027 would be lower than the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year. However, given that annual emissions would exceed the 6,000 MT of CO_2e in the most intensive year of construction activities (2027), construction-related GHG emissions impacts would be potentially significant, even with the implementation of MM **GHG-1**.

Table 4.9-1
CONSTRUCTION-RELATED GHG EMISSIONS

Construction Year	MT of CO_2e/year
2025	3,842
2026	5,670
2027	7,394
Total	**16,906**
Average Annual	**5,635**

MT = metric tons; CO_2e = carbon dioxide equivalents
Source: Appendix 9, Volume 2 to this DPEIR GHG

In addition, as discussed in **Section 4.9.3.4, Regulatory Setting: Local**, DWR has identified screening levels to evaluate construction projects' GHG emissions, which are 25,000 MT of CO_2e in total during the construction phase of a project and 12,500 MT of CO_2e in any single year of project construction. These screening thresholds are set at the levels that aim to aid DWR's progress towards achieving its GHG emission reduction goals.[50] Based on the results shown in **Table 4.9-1**, the total construction phase GHG emissions and average single-year GHG emissions associated with buildout of the CBP would be well below DWR's screening level thresholds. However, as noted in **Section 4.9.3.4, Regulatory Setting: Local**, these screening thresholds are not established as thresholds of significance for CEQA purposes. Therefore, they are presented here for comparison purposes only.

[49] Verma, Ram, electronic communication. 2016. "GHG for SWP." May 13.
[50] DWR. 2020. "Climate Action Plan." https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan (accessed October 2021).

The IEUA has chosen to incorporate the following GHG emission reduction measures identified by the CAPCOA in its 2010 report, *Quantifying Greenhouse Gas Mitigation Measures*, into CBP construction activities, as defined in Mitigation Measure (MM) **GHG-1**:[51]

- Use alternative fuels for construction equipment;
- Use electric and hybrid construction equipment;
- Limit construction equipment idling beyond regulation requirements;
- Institute a heavy-duty off-road vehicle plan; and
- Implement a construction vehicle inventory tracking system.

However, since we do not know to what extent these measures will be sufficient to reduce construction emissions below the SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year, it is not possible to ensure that this significant construction-related impact would be avoided. As such, MM **GHG-1** shall be implemented to minimize construction-related impacts to the greatest extent feasible. As discussed previously, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. As such, while MM **GHG-1** would minimize impacts to the greatest extent feasible, construction-related impacts from implementation of the proposed CBP would be potentially significant.

Operational Emissions

The CBP would also require the consumption of energy for treatment, conveyance, injection, and extraction of water supplies as well as maintenance activities, which would generate GHG emissions. Energy consumption from use of the groundwater monitoring wells would be negligible. In addition, the storage reservoir, pipelines, and turnouts would not directly consume energy because water would be pumped into and through these facilities directly from wells or through booster pump stations. Furthermore, although long-term operation of individual projects implemented under the CBP would involve occasional vehicle trips for operations and maintenance of the facilities, these emissions are assumed to be negligible because CBP facilities would be largely monitored remotely. As a result, CBP facilities would require no more than an average of five to six vehicle trips per day for inspections, testing, and maintenance, and these trips would largely be incorporated into existing operations and maintenance activities. Therefore, this analysis focuses on evaluating GHG emissions associated with energy consumption by the proposed pump stations, injection wells, extraction wells, wellhead treatment facilities, and AWPF (including brine treatment and disposal).

The annual GHG emissions of the CBP would depend on whether it is operating during a call year or a non-call year as well as the current renewable energy portfolio of SCE. During call years, the CBP would extract, pump, and convey up to 50,000 AFY from the Chino Basin; treat and inject up to 15,000 AFY of purified water into the Chino Basin; treat approximately 9,000 AFY of water at the wellhead treatment facilities; and dispose of approximately 1,167 AFY of water via the brine disposal line. In addition, the CBP would offset up to 50,000 AFY of imported water from the SWP during call years. During non-call years, the CBP would extract, pump, and convey up to 10,000 AFY from the Chino Basin; treat and inject up to 15,000 AFY of purified water into the Chino Basin; treat approximately 9,000 AFY of water at the wellhead treatment facilities; and dispose of

[51] CAPCOA. 2010. "Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures." August. https://www.aqmd.gov/docs/default-source/ceqa/handbook/mitigation-measures-and-control-efficiencies/quantifying-greenhouse-gas-mitigation-measures.pdf?sfvrsn=0 (accessed October 2021).

approximately 1,167 AFY of water via the brine disposal line. However, it would not offset imported SWP water.

Table 4.9-2 presents the net change in baseline GHG emissions associated with the CBP during call and non-call years, as well as for the duration of the proposed 25-year water transfer agreements, assuming conservatively that electricity procured for CBP facilities consists of approximately 38 percent of renewable energy (consistent with SCE's current renewables portfolio). Over time, SCE, along with other electricity providers in California, will increase its renewable energy procurement to 60 percent by 2030 and 100 percent by 2045 in accordance with SB 100. As a result, GHG emissions associated with energy consumption by CBP facilities would decrease over the 25-year term of the proposed water transfer agreements as compared to the estimates provided in **Table 4.9-2**. In addition, GHG emissions associated with the provision of SWP imports would decrease as the percentage of electricity supplied by renewable energy resources for operation of SWP infrastructure increases in compliance with SB 100.

Table 4.9-2
OPERATIONAL GHG EMISSIONS

Scenario	Annual CBP Emissions (MT of CO_2e/year)	Annual Offset SWP Emissions (MT of CO_2e/year)	Net Change in Baseline Emissions (MT of CO_2e/year)	Number of Years during Water Transfer Agreement	Total Emissions (MT of CO_2e)
Call Years – SCE Current Renewables Portfolio (38%)	11,401	(27,154)	(15,753)	7.5	(118,148)
Non-call Years – SCE Current Renewables Portfolio (38%)	6,435	0	6,435	17.5	112,613
				TOTAL	**(5,535)**

AFY = acre-feet per year; MT = metric tons; CO_2e = carbon dioxide equivalents; SCE = Southern California Edison
Source: Appendix 9, Volume 2 to this DPEIR

As shown in **Table 4.9-2**, under a call year scenario in which SCE has its current portfolio of 38 percent carbon-neutral electricity sources, the CBP would emit an estimated 11,401 MT of CO_2e, which would be less than the approximately 27,154 MT of CO_2e per year of GHG emissions offset by precluding the need for imported SWP water. Therefore, in this scenario, the CBP would result in a net decrease of approximately 15,753 MT of CO_2e in that year. Under a non-call year scenario in which SCE has its current portfolio of 38 percent carbon-neutral electricity sources, the CBP would emit an estimated 6,435 MT of CO_2e. During these non-call years, the energy requirements and associated GHG emissions of the CBP would not be offset by precluding the import of SWP water. In total, operation of the CBP would result in a net reduction in GHG emissions of approximately 5,535 MT of CO_2e (including the reduction from offsetting SWP imports) over the 25-year term of the proposed water transfer agreements.

As stated in **Section 4.9.4, Thresholds of Significance**, for the purposes of CEQA, the GHG emissions associated with CBP operation would result in a significant impact if the CBP would not meet its fair share of GHG reductions required on a statewide basis by 2030 or if it would fail to procure its electricity from carbon-neutral electricity sources by 2045. By procuring electricity from SCE, which is on-track to achieve 60 percent renewables by 2030, the CBP would not generate indirect GHG emissions associated with electricity consumption that exceed the

statewide 2030 target.[52] Furthermore, if IEUA were to use its own renewable energy facilities to partially or fully supply the electricity demand of CBP facilities, it would accelerate efforts toward achieving a carbon-neutral electricity supply. Therefore, operation of the CBP would meet its fair share of GHG reductions required to achieve the statewide 2030 GHG reduction target, and impacts would be less than significant.

According to SB 100, the Renewables Portfolio Standard requires California to obtain 100 percent of its electricity from carbon-neutral sources by 2045. Although it is projected that SCE would have a 100 percent carbon-neutral power supply by 2045, it is speculative to determine with complete certainty whether this will be achieved in the future. Likewise, it is speculative to determine whether IEUA will achieve its goal of carbon neutrality for all its facilities in the next 15 years. Although the CBP would result in a net reduction in total GHG emissions over the 25-term of the proposed water transfer agreements as compared to existing baseline conditions (see **Table 4.9-2**), the CBP's electricity consumption itself may not be carbon-neutral because GHG emissions may still be generated in both call and non-call years due to the use of electricity supplied from non-renewable energy resources by 2045. As a result of the uncertainty surrounding the future power mix and energy demands of the proposed CBP, the CBP would potentially fail to procure its electricity from carbon-neutral electricity sources by 2045. Therefore, the long-term, indirect impacts of the CBP's operational GHG emissions would be potentially significant in both call and non-call years. Implementation MM **GHG-2** would be required.

Level of Significance Before Mitigation: Potentially Significant.

Mitigation Measures:

GHG-1 ***IEUA shall implement all feasible GHG reduction measures during construction. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:***

- ***Use alternative fuels for construction equipment***
- ***Use electric and hybrid construction equipment***
- ***Limit construction equipment idling beyond regulation requirements***
- ***Institute a heavy-duty off-road vehicle plan***
- ***Implement a construction vehicle inventory tracking system***

GHG-2 ***IEUA shall implement all feasible GHG reduction measures during operations. These may include, but should not be limited to, the following measures identified in the CAPCOA 2010 report, Quantifying Greenhouse Gas Mitigation Measures:***

- ***Exceed Title 24 Building energy efficiency standards***
- ***Procure 100 percent renewable electricity from Southern California Edison, a community choice aggregation program, and/or other on-site and off-site renewable energy systems***
- ***Utilize electric or hybrid vehicles and/or encourage operations and maintenance employees to carpool or otherwise commute using a method other than a single-occupancy fossil-fuel powered vehicle***

Level of Significance After Mitigation: Significant and Unavoidable.

[52] California Public Utilities Commission. 2020. "2020 California Renewables Portfolio Standard: Annual Report." November. https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy_-_electricity_and_natural_gas/2020-rps-annual-report.pdf (accessed October 2021).

Cumulative Impact Analysis

Impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Section 4.9.2.3, Potential Effects of Climate Change**), the cumulative worldwide and statewide effects of GHG emissions are significant. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. As discussed previously, construction-related GHG emissions would exceed the approximated SCAQMD threshold in the most intensive year of construction (2027). In addition, there may not be sufficient renewable energy resources available to fully supply the electricity demand of the CBP by 2045 consistent with the State's long-term carbon neutrality goals. Although the CBP would result in a net reduction in total GHG emissions over the 25-term of the proposed water transfer agreements as compared to existing baseline conditions (see **Table 4.9-2**), the CBP's electricity consumption itself may not be carbon-neutral because GHG emissions may still be generated in both call and non-call years due to the use of electricity supplied from non-renewable energy resources by 2045. As a result, the CBP would potentially hinder the State's 2030 and long-term GHG emission reduction goals, and its GHG emissions would thus be cumulatively considerable.

Furthermore, the proposed CBP would result in a reduction in surplus flows to the Santa Ana River (SAR). While IEUA would continue to meet their baseflow obligations to the SAR, and is projected to exceed their baseflow obligations to the SAR even with the proposed diversions of recycled water from IEUA, WRCRWA, and Rialto, the proposed CBP would probably result in a reduction in surplus flows to the SAR. IEUA is aware that Orange County Water District (OCWD) currently recharges essentially all baseflow of the SAR water discharged from the Prado Dam, and understands that it may also rely on the surplus flows that IEUA has contributed to the SAR in recent years. Given the above, the proposed CBP could have a potential to reduce surplus flows to the SAR, which OCWD may rely on as a contribution to their overall groundwater supply required to meet their service area demand. OCWD has indicated that it may need to increase the volume of imported water purchased in order to replace any reduction in SAR baseflow. While IEUA's modeling of the CBP suggests that the CBP would not result in a violation of the baseflow obligation to the SAR (refer to Subchapter 4.11, Hydrology and Water Quality, and the Addendum to the Technical Memorandum prepared by West Yost provided as Appendix 4 to Volume 2 of this DPEIR), if OCWD has come to rely on surplus flows and would require imported water to supplement their supply as a result, the annual energy emissions that would be offset by precluding the need for imported SWP water by the CBP may be overestimated from a cumulative perspective.

From a project specific perspective, the CBP would result in a net offset of energy emissions by precluding the need for imported SWP water over the 25 year program. However, from a cumulative perspective, if the CBP would result in OCWD requiring an increase in imported water due to reduced surplus flows to the SAR, the cumulative energy demand would be increased commensurate with the amount of imported water OCWD would require from the SWP, thereby requiring energy to deliver an unknown amount of imported water to OCWD to supplement their supply. Nevertheless, as determined above, the CBP would contribute cumulatively considerable GHG emissions as a result of the CBP's electricity consumption itself, which may not be carbon-neutral by 2045, thereby potentially hindering the State's 2030 and long-term GHG emission reduction goals. It would be somewhat speculative to determine to what extent the increased use of imported water by OCWD would increase the Program's cumulative contribution to GHG emissions; regardless, the CBP would contribute to a cumulatively considerable GHG impact that cannot be mitigated.

Although GHG emissions generated by construction and operation of the proposed CBP would result in a significant and unavoidable impact under CEQA for the aforementioned reasons, the CBP would support the State's effort to adapt to climate change by developing new local water supplies that beneficially reuse wastewater and avoid imported water from the SWP. The CBP is a necessary improvement to mitigate the impacts of climate change on water supply reliability, especially during critically dry years, which are expected to increase in frequency and intensity due to climate change. As the climate changes, the State must adapt to climate change by improving water management resilience to account for warmer temperatures and declining snowpack. New facilities built under the CBP would help manage water supply variability, thereby stabilizing water reliability in areas with limited water supply.

*Cumulative Measures: Implementation of Mitigation Measures **GHG-1** and **GHG-2** is required.*

Level of Significance After Mitigation: Significant and Unavoidable

b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

CARB 2017 Climate Change Scoping Plan
The 2017 Scoping Plan focuses primarily on reducing GHG emissions that result from mobile sources, land use development, and stationary industrial sources. The CBP would not involve a considerable increase in new vehicle trips or land use changes that would result in an increase in vehicle trips, such as urban sprawl, and it does not include new stationary industrial sources of GHG emissions. The 2017 Scoping Plan also recognizes that about two percent of the total energy consumption in California is related to water conveyance. As a result, the 2017 Scoping Plan calls for "increased water conservation and efficiency, improved coordination and management of various water supplies, greater understanding of the water-energy nexus, and deployment of new technologies in drinking water treatment, groundwater remediation and recharge, and potentially brackish and seawater desalination."[53] By augmenting local water supplies, the CBP would offset energy demands associated with imported water supplies in furtherance of this goal of the 2017 Scoping Plan. Therefore, the CBP would not conflict with the 2017 Scoping Plan, and no impact would occur.

IEUA CCAP
The IEUA CCAP sets GHG emission reduction goals for IEUA operations, which are listed in **Section 4.9.3.4, Regulatory Setting – Local**. By nature, the CBP directly supports the CCAP goals to maximize recycled water production and storage and maintain the health of the groundwater aquifer as well as the associated objectives to expand recycled water infrastructure and enhance groundwater replenishment capabilities within the Chino Basin. In addition, as shown in **Table 4.9-2**, operation of the CBP would result in a net reduction in GHG emissions over the 25-year term of the proposed water transfer agreements. The CBP also includes components that intentionally lower the power demand on the electrical grid, such as the potential inclusion of in-conduit hydropower facilities at certain locations of the potable water distribution system where energy can be produced in conjunction with reducing system pressure. Furthermore, during call years, the CBP would offset imported water from the SWP, which would save energy and preclude SWP-related GHG emissions. The CBP would also incorporate the use

[53] ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed September 2021).
[53] CARB. 2017. California's 2017 Climate Change Scoping Plan. December 14, 2017. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf (accessed September 2021).

of available on-site renewable energy sources at RP-4, including the 1-MW wind turbine and 1.5-MW battery, to supply part of the energy demand of CBP facilities, if possible. Moreover, the CBP may use energy generated by the 2.5-MW solar array at the Inland Empire Regional Composting Facility (IERCF). Therefore, the CBP would also support the CCAP objective to strive for carbon neutrality through implementation of renewable power generation and beneficial use of resources. Accordingly, the CBP would not conflict with the CCAP, and no impact would occur.

Level of Significance Before Mitigation: Less than Significant.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant.

Cumulative Impact Analysis

As discussed under threshold (a), impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Section 4.9.2,3, Potential Effects of Climate Change**), the cumulative worldwide and statewide effects of GHG emissions are significant. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. The CBP would be consistent with many of the goals of applicable State and local plans and programs, which are designed to reduce the cumulative impact of GHG emissions. Therefore, the contribution of the CBP to cumulative impacts related to consistency with applicable plan, policy or regulation adopted for the purpose of reducing the GHG emissions would not be cumulatively considerable.

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant.

4.9.6 Cumulative Impacts

Impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Section 4.9.2,3, Potential Effects of Climate Change**), the cumulative worldwide and statewide effects of GHG emissions are significant. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. The CBP would be consistent with many of the goals of applicable State and local plans and programs designed to reduce GHG emissions and would result in a net reduction in GHG emissions over the 25-year term of the proposed water transfer agreements (see **Table 4.9-2**). As discussed previously, construction-related GHG emissions would exceed the approximated SCAQMD threshold in the most intensive year of construction (2027). In addition, although the CBP would result in a net reduction in total GHG emissions as compared to existing baseline conditions, the CBP's electricity consumption itself may not be carbon-neutral because GHG emissions may still be generated in both call and non-call years due to the use of electricity supplied from non-renewable energy resources by 2045. As a result, the CBP would not meet the State's long-term GHG emission reduction goal of carbon neutrality, and its GHG emissions would thus be cumulatively considerable. As discussed previously, implementation of MM **GHG-2** would reduce the energy usage of CBP facilities and increase the percentage of electricity supplied to CBP facilities by

renewable energy resources. Nevertheless, implementation of this mitigation measure may not fully mitigate project impacts if IEUA is not able to supply the remaining electricity demand of CBP facilities from carbon-neutral electricity sources by 2045 or otherwise mitigate CBP operational emissions. Therefore, impacts would be significant and unavoidable.

Furthermore, as stated above, from a cumulative perspective, if the CBP would result in OCWD requiring an increase in imported water due to reduced surplus flows to the SAR, the cumulative energy demand would be increased commensurate with the amount of imported water OCWD would require from the SWP, thereby requiring energy to deliver an unknown amount of imported water to OCWD to supplement their supply. Nevertheless, as determined above, the CBP would contribute cumulatively considerable GHG emissions as a result of the CBP's electricity consumption itself, which may not be carbon-neutral by 2045, thereby potentially hindering the State's 2030 and long-term GHG emission reduction goals. It would be somewhat speculative to determine to what extent the increased use of imported water by OCWD would increase the Program's cumulative contribution to GHG emissions; regardless, the CBP would contribute to a cumulatively considerable GHG impact that cannot be mitigated.

Although GHG emissions generated by construction and operation of the proposed CBP would result in a significant and unavoidable impact under CEQA for the aforementioned reasons, the CBP would support the State's effort to adapt to climate change by developing new local water supplies that beneficially reuse wastewater and avoid imported water from the SWP. The CBP is a necessary improvement to mitigate the impacts of climate change on water supply reliability, especially during critically dry years, which are expected to increase in frequency and intensity due to climate change. As the climate changes, the State must adapt to climate change by improving water management resilience to account for warmer temperatures and declining snowpack. New facilities built under the CBP would help manage water supply variability, thereby stabilizing water reliability in areas with limited water supply.

4.9.7 Unavoidable Significant Adverse Impacts

The programmatic evaluation of GHG emissions presented in the preceding analysis demonstrates that construction and operation of individual projects under the proposed CBP would generate GHG emissions that would have a significant impact on the environment. Implementation of MMs GHG-1 and GHG-2 would reduce GHG emissions associated with CBP construction and operational activities by reducing fossil fuel consumption, reducing the operational energy usage of CBP facilities, and increasing the percentage of electricity supplied to CBP facilities by renewable energy resources. Nevertheless, implementation of these mitigation measures may not fully mitigate project impacts if IEUA is not able to reduce construction-related GHG emissions below the threshold of significance, supply the remaining electricity demand of CBP facilities from carbon-neutral electricity sources by 2045, or otherwise mitigate CBP construction and operational emissions. Therefore, this impact would be significant and unavoidable.

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4.10 HAZARDS AND HAZARDOUS MATERIALS

4.10.1 Introduction

This section describes and evaluates issues related to hazards and hazardous materials within the Chino Basin Program (CBP) project area. Discussed are the physical and regulatory settings, the baseline for determining environmental impacts, the criteria used for determining the significance of environmental impacts, and potential impacts and appropriate mitigation measures associated with implementation of the CBP.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Hazards and Hazardous Materials
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Mitigation Measures
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- IEUA, 2016. *IEUA Facilities Master Plan Final Environmental Impact Report (SCH #2016061064)*, February 2017 prepared by ESA (2017 FMP EIR)
- DTSC, 2021. EnviroStor Database, County of San Bernardino search, Available at http://www.envirostor.dtsc.ca.gov/public/ Accessed on September 24, 2021.
- SWQCB, 2021. GeoTracker Map, San Bernardino County search, Available at: http://geotracker.waterboards.ca.gov/. Accessed on September 24, 2021
- Toll Free Airline, 2021. San Bernardino County Public and Private Airports. Available at http://www.tollfreeairline.com/california/sanbernardino.htm. Accessed on September 24, 2021.

No comments pertaining to hazards and hazardous materials were received in response to the Notice of Preparation. No comments pertaining to this issue were received at the Scoping Meeting held on behalf of the project.

4.10.2 Environmental Setting: Hazards and Hazardous Materials

Introduction

The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and State laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such, or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases). The term “hazardous material” is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.[1]

In some cases, past industrial or commercial activities on a site or an accidental spill could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater

[1] State of California Health and Safety Code Chapter 6.95, Section 25501(p).

contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials can cause health hazards when released to the soil, groundwater, or air. Individuals are typically exposed to hazardous materials through inhalation or bodily contact. Exposure can come as a result of an accidental release during transportation, storage, or handling and disposal of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from previous spills or leaks.

Chino Basin Service Area

This section describes the existing conditions of the Chino Basin (where the CBP would be implemented) with respect to hazards and hazardous materials. It discusses the potential to encounter hazardous materials in soil and/or groundwater in this area, potential fire hazards, and potential hazards related to proximity to schools and airports.

Hazardous Building Materials

Hazardous materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), and polychlorinated biphenyls (PCBs), may be contained in building materials and released during demolition activities. The likelihood of hazardous materials in building components can be generally assessed based on the age of the structures, as these materials were phased out of use during the 1970s and 1980s. Any structures proposed for demolition in implementing elements of the CBP would require evaluation of the date of construction and possible inspections by qualified professional to determine presence of ACM, LBP, and/or PCBs.

Asbestos Potential

Asbestos is a naturally-occurring fibrous material that was used as a fireproofing and insulating agent in building construction before such uses were banned by the U.S. Environmental Protection Agency (U.S. EPA) in the 1970s, although some nonfriable[2] use of asbestos in roofing materials still exists. The presence of asbestos can be found in such materials as ducting insulation, wallboard, shingles, ceiling tiles, floor tiles, insulation, plaster, floor backing, lining for piping, and many other building materials. ACMs are considered both a hazardous air pollutant and a human health hazard. The risk to human health is from inhalation of airborne asbestos, which commonly occurs when ACMs are disturbed during demolition and renovation activities.

Lead Potential

Lead and lead compounds can be found in many types of paint. In 1978, the Consumer Product Safety Commission set the allowable lead levels in paint at 0.06 percent by weight in a dry film of newly applied paint. Lead dust is of special concern, because the smaller particles are more easily absorbed by the body. Common methods of paint removal, such as sanding, scraping, and burning, create excessive amounts of dust. Lead based paints (LBPs) are considered likely present in buildings constructed prior to 1960, and potentially present in buildings built prior to 1978.

PCBs Potential

PCBs are organic oils that were formerly placed in many types of electrical equipment, such as transformers and capacitors, primarily as electrical insulators. They may also be found in hydraulic

[2] Nonfriable asbestos refers to ACMs that contain asbestos fibers in a solid matrix that does not allow for them to be easily released.

fluid used for hoists, elevators, etc. Years after widespread and commonplace installation, it was discovered that exposure to PCBs may cause various health effects and that PCBs are highly persistent in the environment. The U.S. EPA has listed these substances as carcinogens. PCBs were banned from use in electrical capacitors, electrical transformers, vacuum pumps, and gas turbines in 1979.

Household Hazardous Materials

Household hazardous waste is generated at a place of residence, as defined in California Health and Safety Code Section 25218.1(e). Examples of common household hazardous wastes include antifreeze, household batteries, compressed gas cylinders, television/computer monitors, consumer electronic devices, home-generated sharps (e.g., needles, syringes, and lancets), oil-based paints, latex paints, motor oil, used oil filters, rodent poison, asbestos, gasoline, fluorescent lamps, partially used aerosol containers, and weed killers. A household hazardous waste collection facility is commonly operated by local public agencies or their contractors for the purposes of collecting, handling, treating, storing, recycling, or disposing of household hazardous wastes (Health and Safety Code § 25218.1(f)). A household hazardous waste collection facility may also accept wastes from small businesses that are conditionally exempt generators, defined as a small business that generates no more than 100 kilograms of hazardous waste per month.

The Valley region of San Bernardino County has multiple hazardous waste collection centers for permanent household hazardous waste located in Chino, Upland, Ontario, and Rancho Cucamonga. Most facilities accept items such as lawn and garden care products, paint and paint-related products, automotive fluids and batteries, beauty products and medicines, household cleaners, electronic waste, and other common household hazardous wastes.

Hazardous Materials in Soil and Groundwater

Human activities have caused a variety of contamination within the Chino Basin. Historically, most cities within the region contained agricultural lands that utilized pesticides which may have contaminated soils throughout the project area. Several of the project areas envisioned for future CBP facilities may occupy agricultural areas where pesticide and herbicide use were once common. Soils in such areas can retain residual concentrations of such materials that may exceed significance thresholds. Future excavations in such areas may require special management, disposal, or blending with clean soils to reduce concentrations to acceptable levels. Furthermore, airports, gas stations, landfills, and other industrial facilities have resulted in contamination of groundwater. Groundwater plumes exist throughout the Chino Basin but are primarily concentrated around southern Ontario and Chino (State Water Resources Control Board [SWRCB], 2021).

To assess the potential for contamination in soil and groundwater within the project area, an environmental database review was conducted to identify environmental cases,[3] permitted hazardous materials uses,[4] and spill sites[5]. California Government Code Section 65962.5 requires State and local agencies to compile and update, at least annually, lists of hazardous waste sites and facilities. While Government Code Section 65962.5 makes reference to a “list”, commonly

[3] Environmental cases are those sites that are suspected of releasing hazardous substances or have had cause for hazardous substances investigations and are identified on regulatory agency lists.
[4] Permitted hazardous materials uses are facilities that use hazardous materials or handle hazardous wastes that operate under appropriate permits and comply with current hazardous materials and hazardous waste regulations.
[5] Spill sites are locations where a spill has been reported to the State or Federal regulatory agencies. Such spills do not always involve a release of hazardous materials.

referred to as the Cortese List, this information is currently available from the following online data resources (California Environmental Protection Agency [CalEPA], 2016):

- State Water Resources Control Board (SWRCB) GeoTracker database, and
- California Department of Toxic Substances Control (DTSC) EnviroStor database.

Information regarding the potential presence of subsurface contamination within the Chino Basin is discussed below. Identified sites include the following types of environmental cases:

EnviroStor: The DTSC's EnviroStor database is an online search and Geographic Information System (GIS) tool for identifying sites that have known or potential contamination as well as facilities permitted to treat, store, or dispose of hazardous waste.

- **Facility Types:**
  - School: Identifies proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. School sites are further defined as "Cleanup" (remedial actions occurred) or "Evaluation" (no remedial action occurred) based on completed activities. All proposed school sites that will receive State funding for acquisition or construction are required to go through a rigorous environmental review and cleanup process under DTSC's oversight. For more information, go to: http://www.dtsc.ca.gov/Schools/index.cfm
  - State Response: Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.
  - Evaluation: Identifies suspected, but unconfirmed, contaminated sites that need or have gone through a limited investigation and assessment process. If a site is found to have confirmed contamination, it will change from Evaluation to either a State Response or Voluntary Cleanup site type. Sites found to have no contamination at the completion of the limited investigation and/or assessment process result in a No Action Required (for Phase I assessments) or No Further Action (for Preliminary Endangerment Assessment (PEA) or Phase II assessments) determination.
  - Corrective Action: Investigation or cleanup activities at Resource Conservation and Recovery Act (RCRA) or State-only hazardous waste facilities (that were required to obtain a permit or have received a hazardous waste facility permit from DTSC or U.S. EPA) are called "corrective action."
  - Voluntary Cleanup: Identifies sites with either confirmed or unconfirmed releases, and the project proponents have requested that DTSC oversee evaluation, investigation, and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

DTSC Sites: The DTSC oversees cleanup at facilities with a variety of environmental concerns. It also identifies facilities for further investigation based on their past or present uses, which could have caused hazardous materials releases.

Hazardous Waste Permitting (HWP): Hazardous Waste Permitting is a database that includes permitting, modifications, corrective action, closure and post-closure activities for hazardous waste facilities. It is the source database for facility information in the EnviroStor database and is in the process of conversion completely to the EnviroStor database.

GeoTracker: The SWRCB's data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Table 4.10-1 shows the hazardous waste site type and number of open status hazardous waste sites found within the Chino Basin area.

Table 4.10-1
LISTED SITES WITHIN THE PROJECT AREA

Hazardous Waste Site Type	Number of Sites
EnviroStor State Response Cleanup Sites	3
EnviroStor Evaluation Sites	8
EnviroStor Voluntary Cleanup Sites	15
EnviroStor Corrective Action Sites	4
GeoTracker LUST Cleanup Sites	17
DTSC Cleanup Sites	32
DTSC Hazardous Waste Permit Sites	8
Land Disposal Sites	16
Total	103
SOURCE: EnviroStor, GeoTracker, 2021	

Below is a list and brief description of hazardous materials release sites in the Chino Basin that have affected soil and/or groundwater. **Figures 4.11-23 to 4.11-25** show the location of contamination plumes resulting from past industrial activities in the service area.

Active Sites

Chino Airport[6]

The Chino Airport is located at 7000 Merrill Avenue in Chino. This site has been the subject of ongoing site assessments and cleanups under regulatory oversight of the Regional Water Quality Control Board (RWQCB) since 1990. This site is not on the National Priorities List (NPL). From the early 1940s until 1948, the airport was used for flight training and aircraft storage. Since then, activities at this site included modification of military aircraft, crop dusting, aircraft engine-repair, painting, striping and washing, dispensing of fire-retardant chemicals, and general aircraft maintenance. The primary chemicals of concern in the groundwater at the site are trichloroethene; 1,2,3-trichloropropane; cis-1,2-dichloroethene; 1,2-dichlorothethane; and 1,1-dichloroethene. Offsite plume characterization field activities were initiated in 2007. The depth of groundwater ranged from 25 to 50 feet below ground surface (bgs), with the depth to water decreasing toward the south. Since the 2007 investigation, groundwater monitoring wells have been installed throughout the site for sampling. Groundwater is pumped in this area by production wells and used for agricultural supply, industrial supply, and municipal water supply. The drinking water supply is of primary concern (SWRCB, 2021).

GE Engine Services Test Cell Facility[7]

The General Electric (GE) Engine Services is located at 2264 East Avion Place in Ontario. This site has been the subject of ongoing site assessments and cleanups under regulatory oversight of the DTSC and RWQCB since 2013, but is not listed on the NPL. GE has operated a jet engine facility at this site from 1956 to the present where both commercial and military engines are tested.

[6] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208634049
[7] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208133868

About 6,000 gallons of hazardous waste were disposed of in dry wells. There is an estimated 600 cubic yards of waste and contaminated spill on the site. Results of preliminary investigation in 1987 indicated the presence of 1,1,1-trichlorethane (TCA); tetrachloroethene (PCE); chloroform; naphthalene; 2-methylnaphthalene; and volatile aromatics (xylene, toluene, ethylbenzene) in soils near the dry wells. As a result, chemical contaminants affected the groundwater, and a plume extends in a southwesterly direction to Grove Avenue. Concentrations of volatile organic compounds (VOCs) in shallow soils in areas at the site have reached acceptable closure levels. In April 2015, RWQCB stated that soil is no longer a source of the releases to groundwater. DTSC will proceed with the Land Use Covenant (LUC) to complete the site soil vapor remediation (SWRCB, 2021).

GE Flatiron Facility[8]

The GE Flatiron Facility is located at 234 Main Street in Ontario. The site has been the subject of ongoing site assessments and cleanups under regulatory oversight of the RWQCB. The site is listed as an Open Cleanup Program Site undergoing remediation. This Flatiron Facility operated from 1927 to 1982. Since 1982, the property has been owned by Ontario Business Park and has been occupied by commercial and light industrial uses. Soil and groundwater beneath the facility has been contaminated. The depth of groundwater beneath the site ranges from 200 to 380 feet. The contaminants present in the groundwater are trichloroethylene (TCE); PCE; and chromium (Cr). The groundwater contaminate plume extended over 0.5-mile in width and approximately 1.5 miles in length in the southwesterly direction along the groundwater flow path. The contaminants present in soil are PCE; TCE; Cr; total xylenes; toluene; ethylbenzene; 1,1,1-trichloroethene; and 1,1,2-trichloroethane. In December 2009, a total of 2,406 pounds of VOCs (primarily TCE) and 769 pounds of chromium were removed and treated (SWRCB, 2021).

Kaiser Steel Site[9]

The Kaiser Steel site is located at 9400 Cherry Avenue in Fontana. Site assessments have been ongoing since 2012 by the RWQCB and the DTSC. This site is not on the NPL. Kaiser Steel is the result of merging four different Kaiser Steel sites. The original Kaiser Steel Mill was located on approximately 1,200 acres in Fontana. The facility was a former integrated steel production plant that the Kaiser Steel Corporation owned and operated from approximately 1942 to 1983. Following shutdown, portions of the original Kaiser property were sold or otherwise transferred. The potential presence of hazardous waste became known in 1985, when asbestos and liquids from a benzol production area were released during demolition of onsite structures. The asbestos was removed and is no longer of concern. In August 1988 and January 1989, Preliminary Assessment/Site Inspection Reports (PA/SI) were completed in an effort to identify areas of contamination. Of the 32 areas investigated, 12 were identified as requiring no further action and 20 were recommended for remedial investigation. Through further testing, constituents of concern detected at the sites included metals; petroleum; PCBs; Polycyclic Aromatic Hydrocarbons (PAHS); radioactive isotopes; and VOCs such as benzene and toluene. The past uses of the sites that caused groundwater contamination include: hazardous waste treatment, landfill and construction, metal plating and manufacturing, sewage and waste treatment, sewage treatment ponds, and wastewater ponds. Groundwater contamination is currently being monitored (SWRCB, 2021).

[8] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0607132486
[9] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SLT8R1484121

Milliken Sanitary Landfill[10]

The Milliken Sanitary Landfill (MSL) is located at 2050 South Milliken Avenue in Ontario and has been undergoing monitoring by the RWQCB since 2014. The MSL is owned and operated by the County of San Bernardino Solid Waste Management Division. The total area of the MSL is 196 acres of which 140 acres were used for waste disposal. The MSL has an estimated in-place volume of 25 million cubic yards of solid waste and cover material. The MSL was operated as a Class III Sanitary Landfill from 1956 to March 1999. The landfill is undergoing corrective action; however, recent monitoring has shown decreases of contaminant levels in soil and no statistical anomalies were identified for metals or VOCs. The majority of the monitoring wells have become dry and over the last two years, increasing trends are noted for most inorganics in samples. As of 2014, VOCs remain below State water drinking standards (SWRCB, 2021).

Alger Manufacturing Company Inc.[11]

The Alger Manufacturing Company, a Cleanup Program Site, is located at 724 Bon View in Ontario and has been under investigation by the RWQCB since 2000. In 1981, City of Ontario inspectors conducted an inspection of the property in response to a complaint about heavy accumulation of oil throughout the interior of the buildings. Several building alterations and additions, which were completed without proper permits, including oil tanks, were installed below the floor of one building. In 1992, a site investigation selected soil samples for VOCs and TPH. The highest concentration of tetrachloroethylene (24,000,000 parts per billion (ppb)) was detected in soil samples collected from 25 feet bgs. Groundwater contamination levels remain above the drinking water supply standard (SWRCB, 2021).

Upland Landfill[12]

The Upland Landfill is located off Campus Avenue between 14th and 15th Streets in Upland and has been under investigation by the RWQCB since 1982. The inactive landfill is located on the site of a former gravel quarry. The landfill is bisected by the West Cucamonga storm drain, which is now lined with concrete where surface runoff empties into the drain. Ponding was evident for 6 to 8 years. VOCs, PCE, TCE, and chlorides have been suspected of contaminating the groundwater that is used for multiple uses, including drinking water and other domestic uses (SWRCB, 2021).

Foss Brothers Dairy[13]

The Foss Brothers Dairy is located at 6641 Riverside Drive in Chino. The Dairy consists of a retail commercial dairy market and parking areas. In March 2003, a 500-gallon underground gasoline storage tank was removed from the site. Soil sampling after tank removal identified a significant release of petroleum hydrocarbons from the tank system. The primary contaminate of concern is gasoline. Traces of these hydrocarbons affect the aquifer used for drinking water supply (SWRCB, 2021).

Van Hofwegen Dairy[14]

The Van Hofwegen Dairy is located fairly close to the Foss Brothers Dairy at 15913 South Mountain Avenue in Chino. The RWQCB has been remediating the site since 2006. In May 1999, petroleum hydrocarbons were first detected in the soil and groundwater at the site. Primary

[10] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=L10007458441
[11] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL208413896
[12] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=L10005341539
[13] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607132420
[14] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0607199039

contaminants of concern are gasoline, MTBE, TBA, and other fuel oxygenates that effect the aquifer used for the drinking water supply (SWRCB, 2021).

South Archibald TCE Plume[15]
The South Archibald TCE Plume is located south of the Ontario Airport between East Riverside Drive and South Archibald Avenue in Ontario. This plume of groundwater is contaminated by VOCs, nitrates, and TCE (SWRCB, 2021).

Sensitive Receptors

Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors throughout the Chino Basin and there is the potential for many sensitive receptors to be within 0.25 mile of existing and proposed future CBP facilities.

Wildland Fire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) maps the Fire Hazard Severity Zones (FHSZ) of the cities within the Chino Basin. The FHSZs are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history (CAL FIRE, 2021). The Chino Basin contains moderate, high, and very high FHSZs. **Figure 4.10-1** shows the FHSZs within the project area (CAL FIRE, 2021).

Airports

There are three public airports within the Chino Basin, including the Chino Airport, the Ontario International Airport, and the Cable Airport, as listed in **Table 4.10-2** below.

Table 4.10-2
AIRPORTS WITHIN THE CHINO BASIN

Airport	Address
Chino Airport (CNO)	7000 Merrill Avenue, Chino, CA 91710
LA/Ontario International Airport (ONT)	2500 East Airport Drive, Ontario, CA 91761
Cable Airport (CCB)	1749 West 13th Street, Upland, CA 91786
SOURCE: Toll Free Airline, 2021	

Schools

Based on a review of the schools supported by the 9 school districts that are within the Chino Basin, there are approximately 156 existing schools within the project area.

4.10.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, and guidelines that are applicable to the proposed project are summarized below.

[15] https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000004658

4.10.3.1 Federal

U.S. Environmental Protection Agency

The U.S. EPA is the primary federal agency responsible for the implementation and enforcement of hazardous materials regulations. In most cases, enforcement of environmental laws and regulations established at the federal level is delegated to State and local environmental regulatory agencies. Federal regulations such as the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA), regulate the cleanup of known hazardous waste sites and compile lists of the sites investigated, or currently being investigated, for a release or potential release of a regulated hazardous substance under the CERCLA regulations. The NPL of Superfund Sites is the U.S. EPA's database of hazardous waste sites currently identified and targeted for priority cleanup action under the Superfund program including Proposed NPL sites, Delisted NPL sites, and NPL Recovery sites. The NPL Liens database contains a list of filed notices of federal Superfund Liens. Under the authority granted the U.S. EPA by CERCLA of 1980, the U.S. EPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability.

The Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984 requires hazardous waste handlers (generators, transporters, treaters, storers, and disposers of hazardous waste) to provide information about their activities to State environmental agencies. These agencies pass the information to regional and national U.S. EPA offices.

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, State, and local levels. This includes the development of a national capability to mitigate against, prepare for, respond to, and recover from a full range of emergencies.

Department of Defense

The United States Geological Survey (USGS) maintains the U.S. Department of Defense (DOD) database, which consists of federally owned or administered lands, administered by the DOD, that have an area equal to or greater than 640 acres in the United States, Puerto Rico, and/or the U.S. Virgin Islands.

Formerly Used Defense Sites

The U.S. Army Corps of Engineers maintains a database of locations of Formerly Used Defense Sites (FUDS) where the U.S. Army Corps of Engineers is actively working or will take necessary cleanup actions.

Occupational Safety and Health Administration

The Occupational Safety and Health Act of 1970 (OSH Act) requires employers to provide a safe and healthful workplace. The Occupational Safety and Health Administration (OSHA) sets and enforces standards for safe and healthful working conditions.

Department of Transportation

The U.S. Department of Transportation (DOT) includes the Pipeline and Hazardous Materials Safety Administration (PHMSA) which is responsible for regulating and ensuring the safe and secure movement of hazardous materials to industry and consumers by all modes of

transportation, including pipelines. Code of Federal Regulations (CFR) Title 49 governs the manufacturing of packaging and transport containers; packing and repacking; labeling; and the marking of hazardous material transport.

Department of Housing and Urban Development
Federal and State regulations govern the renovation and demolition of structures where materials containing lead and asbestos are present. The U.S. Department of Housing and Urban Development (HUD) provides guidelines regulating lead exposure. CFR Part 61, Subpart M regulates asbestos exposure.

4.10.3.2 State

The primary State agencies with jurisdiction over hazardous chemical materials management are the DTSC and the Santa Ana RWQCB. Other State agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES)—California Accidental Release Prevention (CalARP), California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation), and CIWMB. Hazardous materials management laws in California include the following statutes and regulations:

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.)
The HWCA is the State equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, and transportation and permitting requirements, as well as in its penalties for violations.

California Accidental Release Prevention Program (CalARP)
The purpose of the CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures.

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act)
The Business Plan Act requires preparation of hazardous materials business plans (HMBP) and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code §§ 25500-25519). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the State. Local agencies are responsible for administering these regulations.

Several State agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 25500 et seq.
This code and the related regulations in 19 California Code of Regulations (CCR) Sections 2620 et seq., require local governments to regulate local business storage of hazardous materials in excess of certain quantities. The law also requires that entities storing hazardous materials be prepared to respond to releases. Those using and storing hazardous materials are required to submit an HMBP to their local Certified Unified Program Agency (CUPA) and to report releases to their CUPA and the State Office of Emergency Services. This code would apply to the program because the contractors would be required to prepare a HMBP that would provide procedures for the safe handling, storage, and transportation of hazardous materials.

California Division of Occupational Safety and Health (Cal/OSHA)
Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would increase worker safety and reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Health and Safety Code, Section 25270, Aboveground Petroleum Storage Act
Health and Safety Code Sections 25270-25270.13 apply to facilities that operate a petroleum aboveground storage tank with a capacity greater than 660 gallons or combined aboveground storage tanks capacity greater than 1,320 gallons or oil-filled equipment where there is a reasonable possibility that the tank(s) or equipment may discharge oil in “harmful quantities” into navigable waters or adjoining shore lands. If a facility falls under these criteria, it must prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.

Government Code Section 65962.5, Cortese List
The provisions in Government Code Section 65962.5 are commonly referred to as the “Cortese List” (after the Legislator who authored and enacted the legislation). The list, or a site’s presence on the list, has bearing on the local permitting process, as well on compliance with CEQA. The list is developed with input from the State Department of Health Services, SWRCB, CIWMB, and DTSC. At a minimum, at least annually the DTSC shall submit to the Secretary for Environmental Protection a list of the following:

1. All hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code.
2. All land designated as hazardous waste property or border zone property pursuant to Sections 25220-25227) of the Health and Safety Code.

3. All information received by the DTSC pursuant to Section 25242 of the Health and Safety Code on hazardous waste disposals on public land.
4. All sites listed pursuant to Section 25356 of the Health and Safety Code.
5. All sites included in the Abandoned Site Assessment Program.
6. All underground storage tanks for which an unauthorized release report is filed pursuant to Section 25295 of the Health and Safety Code.
7. All solid waste disposal facilities from which there is a migration of hazardous waste and for which a California regional water quality control board has notified the DTSC pursuant to Water Code Section 13273(e).
8. All cease and desist orders issued after January 1, 1986, pursuant to Section 13301 of the Water Code, and all cleanup or abatement orders issued after January 1, 1986, pursuant to Section 13304 of the Water Code, that concern the discharge of wastes that are hazardous materials.
9. All solid waste disposal facilities from which there is a known migration of hazardous waste.

The Secretary for Environmental Protection shall consolidate the information submitted pursuant to this section and distribute it in a timely fashion to each city and county in which sites on the lists are located. The Cortese List applies to this program because there are sites on the Cortese List within the Chino Basin.

Utility Notification Requirements

Title 8, Section 1541 of the CCR requires excavators to determine the approximate locations of subsurface utility installations (e.g., sewer, telephone, fuel, electric, water lines, or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (§§ 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations that are members or participate and share in the costs of a regional notification center are in compliance with this section of the code. Underground Services Alert of Southern California (known as DigAlert) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of DigAlert that may have underground facilities at the location of excavation. Members will mark or stake their facilities, provide information, or give clearance to dig.

4.10.3.3 Local

Certified Unified Program Agency (CUPA)

In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Waste
- Hazardous Materials Business Plan
- California Accidental Release Prevention Program
- Underground Hazardous Materials Storage Tanks

- Aboveground Petroleum Storage Tanks / Spill Prevention Control & Countermeasure Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

In the County of San Bernardino, the Hazardous Materials Division of the San Bernardino County Fire Department is designated as the CUPA responsible for implementing the above-listed program elements. The laws and regulations that established these programs require that businesses that use or store certain quantities of hazardous materials and submit an HMBP that describes the hazardous materials usage, storage, and disposal to the CUPA. The contractors constructing the specific project and IEUA as the operator of the facility would be required to prepare and implement an HMBP.

San Bernardino County Emergency Operations Plan[16]

The Emergency Management Program of San Bernardino County is governed and coordinated by the San Bernardino County Fire Department, Office of Emergency Services. The National Response Framework (NRF), National Incident Management System (NIMS), Standardized Emergency Management System (SEMS), and State of California Emergency Operations Plan provide planning and policy guidance to counties and local entities. These documents support the foundation for the County's Emergency Operations Plan (EOP), an all-hazard plan describing how the County will organize and respond to incidents. It is based on and compatible with the laws, regulations, plans, and policies listed above. The EOP describes how various agencies and organizations in the County will coordinate resources and activities with other Federal, State, County, local, and private-sector partners (San Bernardino County Fire Department, 2013).

Multi-Jurisdictional Hazard Mitigation Plan (MJHMP)

The MJHMP is reviewed, monitored, and updated to reflect changing conditions and new information every five years.[17] The 2017 updated San Bernardino County Unincorporated Area MJHMP was approved by FEMA. The MJHMP presents updated information regarding hazards faced by the county, San Bernardino County Fire Protection District, San Bernardino County Flood Control District, Big Bear Valley Recreation and Parks District, Bloomington Recreation and Parks District, and those Board-governed Special Districts administered by the San Bernardino County Special Districts Department. The MJHMP also presents measures to help reduce consequences from hazards, as well as outreach/education efforts within the unincorporated area of the County since 2005.

San Bernardino County Fire Department (SBCFD)

The Chino Basin receives fire and emergency response services from the SBCFD. The SBCFD is responsible, on both the city and county level, for enforcing the State regulations governing hazardous waste generators, hazardous waste storage, and underground storage tanks, including inspections and enforcement. The SBCFD also regulates the use, storage, and disposal of hazardous materials in San Bernardino County by issuing permits, monitoring regulatory compliance, investigating complaints, and other enforcement activities.

In addition to providing fire protection and emergency services, the SBCFD regulates the use and storage of hazardous materials for the county and provides emergency response in the event of accidental release of hazardous materials.

[16] http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Emergency-Operations-Plan.pdf
[17] http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf

The SBCFD also administers the local Fire Code which incorporates articles of the Uniform Fire Code (UFC). The UFC is a model code, setting construction standards for buildings and associated fixtures, in order to prevent or mitigate hazards resulting from fire or explosion. The SBCFD reviews technical aspects of hazardous waste site cleanups, and oversees remediation of certain contaminated sites resulting from leaking underground storage tanks. The SBCFD is also responsible for providing technical assistance to public and private entities which seek to minimize the generation of hazardous waste.

Hazardous Materials Fire Code Requirements

As the CUPA, the SBCFD enforces the hazardous materials-related standards of the California Fire Code, including requirements for signage of hazardous materials storage areas, storage of flammable materials, secondary containment for storage containers, and separation of incompatible chemicals.

4.10.4 Thresholds of Significance

The criteria used to determine the significance of impacts related to hazards and hazardous materials are based on Appendix G, Section IX, of the CEQA Guidelines. The proposed CBP would result in a significant impact with respect to hazards or hazardous materials if the project would:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

A discussion of the impacts and mitigation measures for the proposed project are presented below.

4.10.5 Potential Impacts

This analysis focuses on the potential to encounter hazardous substances in soil and groundwater during construction and is based on regulatory database searches. The analysis also addresses the potential for the CBP projects to release hazardous materials during construction and operation, interfere with an adopted emergency response plan or emergency evacuation plan, and create fire hazards. Each potential impact is assessed in terms of the applicable regulatory requirements, and mitigation measures are identified as appropriate.

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction: All Facilities
Construction activities would involve the use of adhesives, solvents, paints, thinners, petroleum products, and other chemicals. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. The use of hazardous materials and substances during construction would be subject to the federal, State, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Setting. If not properly handled, however, improper use of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. IEUA is required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the use and possible accidental release of hazardous materials during construction of proposed facilities such as Health and Safety Code Sections 25500 et seq.

Operation: All Facilities
Operation of the proposed facilities could include the storage and use of chemicals. Any storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Setting. The delivery and disposal of chemicals to and from water and wastewater treatment facility sites would occur in full accordance with all applicable federal, State, and local regulations. As noted in the Regulatory Setting, an HMBP must be prepared per mitigation measures (MMs) **HAZ-1** and **HAZ-2** and implemented for the proposed facility upgrades as required by the County of San Bernardino CUPA. The HMBP would minimize hazards to human health and the environment from use of hazardous materials. Compliance with all applicable federal, State, and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

In most instances these proposed facilities would not involve the routine transport, use, or disposal of hazardous materials. However, in certain instances hazardous materials are used routinely in support of drilling wells, groundwater production operations, and related treatment operations, and thus, some activities in support of Project Category 1 may generate routine transport of hazardous materials. Construction activities would be required for the installation of proposed improvement upgrades at the existing treatment plant facilities. Construction activities required for implementation of the facilities would potentially involve drilling, trenching, excavation, grading, and other ground-disturbing activities. The anticipated construction activities described above would temporarily require the transport, use, and disposal of hazardous materials including gasoline, diesel fuel, hydraulic fluids, paint, and other similarly related materials. Operational activities could require the installation of treatment facilities that use chemicals to ensure that recovered water from well pumping would be safe for drinking. For instance, if during extractions from the Chino Basin, groundwater is treated with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in

the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for Category 1 facilities would be less than significant.

Although IEUA is required to manage the use of and disposal of hazardous or toxic materials in accordance with existing laws and regulations, the implementation of MMs **HAZ-1** through **HAZ-6**, outlined below, is required to ensure that the use and generation of hazardous substances in support of Project Category 1 facilities would not pose a significant hazard to workers, adjacent land uses, or the environment. These mitigation measures will be applied to these future CBP projects and would reduce potential impacts to below significance thresholds.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Installation of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long term operation of such facilities can require small quantities of hazardous materials, but typically only minimal quantities to keep equipment operating safely and efficiently.

Impacts would be the same as Project Category 1. The mitigation measures identified for Project Categories 1 also apply to Project Category 2 facilities.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the increase in safe storage capacity would have no potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Construction of these facilities can require delivery of hazardous materials (such as petroleum products) to support their installation. Long-term operation of such facilities as AWPF and wellhead treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water and

potable water sources prior to distribution. The mitigation measures identified for Project Categories 1 and 2 also apply to Project Category 4 projects.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant Impact

Mitigation Measures:

HAZ-1: ***For CBP facilities that handle hazardous materials or generate hazardous waste, the Hazardous Materials Business Plan prepared and submitted to the Certified Unified Program Agency shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for Hazardous Materials Business Plans. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The Hazardous Materials Business Plan shall be approved prior to operation of the given facility.***

HAZ-2: ***The Hazardous Materials Business Plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.***

HAZ-3: ***Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.***

HAZ-4: ***All hazardous materials during both operation and construction of CBP Facilities shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and federal law.***

HAZ-5: ***Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and federal law.***

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

The Chino Basin project area is largely urbanized with residential, commercial, and industrial uses in most areas except southern Chino and Ontario, and Prado Basin. As the project area continues to develop, the addition of more development could create a significant hazard to the public or the environment through the routine transport, use, and/or disposal of hazardous materials. However, all cumulative development would be subject to federal, State, and local regulations related to the routine transport, use, storage, and disposal of hazardous materials. Since the proposed CBP individual projects would result in less than significant impacts related to the

routine handling, use, and/or disposal of hazardous materials through the implementation of mitigation, the CBP's contributions to such impacts would be not be cumulatively considerable, and therefore, would not result in a significant cumulative impact.

*Cumulative Measures: Mitigation measures **HAZ-1** through **HAZ-5** are required to minimize cumulative impacts.*

Level of Significance After Mitigation: Less than Significant

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction

As discussed above, construction activities associated with implementation of the proposed Project Category 1 facilities could create hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials used in construction activities and equipment. Construction activities would involve the use of adhesives, solvents, paints, thinners, petroleum products, and other chemicals. Cal/OSHA regulations provide for the proper labeling, storage, and handling of hazardous materials to reduce the potential harmful health effects that could result from worker exposure to hazardous materials. If not properly handled, however, accidental release of these substances could expose construction workers, degrade soils, or become entrained in stormwater runoff, resulting in adverse effects on the public or the environment. Agencies implementing Category 1 projects are required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the accidental release of hazardous materials during construction of proposed facilities such as Health and Safety Code Sections 25500 et seq. Compliance with all applicable federal, State, and local regulations can reduce potential impacts to the public or the environment regarding accidental release of hazardous materials to less than significant impact, but a contingency mitigation measure is provided to ensure accidental releases and any related contamination would not significantly affect the environment at facility locations.

Where structures may need to be demolished such structures would need appropriate abatement of identified asbestos prior to demolition. federal and State regulations govern the demolition of structures where materials containing lead and asbestos are present. ACMs are regulated both as a hazardous air pollutant under the Clean Air Act and as a potential worker safety hazard under the authority of Cal/OSHA. These requirements include SCAQMD Rules and Regulations pertaining to asbestos abatement (including Rule 1403); Construction Safety Orders 1529 (pertaining to asbestos) and 1532.1 (pertaining to lead) from CCR Title 8; CFR Title 40, Part 61, Subpart M (pertaining to asbestos); and lead exposure guidelines provided by the U.S. Department of Housing and Urban Development (HUD). Asbestos and lead abatement must be performed and monitored by contractors with appropriate certifications from the California Department of Health Services.

In addition, Cal/OSHA has regulations concerning the use of hazardous materials, including requirements for safety training, availability of safety equipment, hazardous materials exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA enforces the hazard communication program regulations, which include provisions for identifying and labeling hazardous materials, describing the hazards of chemicals, and documenting employee-training programs. All demolition that could result in the release of lead and/or asbestos would be conducted according to Cal/OSHA standards. Adherence to existing regulations and the mitigation measure provided below would ensure that potential impacts related to ACMs and LBPs would be less than significant.

The use of hazardous materials and substances during construction would be subject to the federal, State, and local health and safety requirements for the handling, storage, transportation, and disposal of hazardous materials, summarized in the Regulatory Setting. With compliance with these regulations, and preparation and implementation of MM **HAZ-6**, hazardous material impacts related to construction activities would be less than significant.

Operation
Operation of the proposed facilities could include the storage and use of chemicals. Any storage tanks would be designed in accordance with the applicable hazardous materials storage regulations for long-term use summarized in the Regulatory Setting. The delivery and disposal of chemicals to and from water and wastewater treatment facility sites would occur in full accordance with all applicable federal, State, and local regulations. Additionally, during extractions from the Chino Basin, groundwater may require treatment with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for Category 1 facilities would be less than significant.

As noted in the Regulatory Setting, an HMBP must be prepared per MMs **HAZ-1** and **HAZ-2** and implemented for the proposed facility upgrades as required by the County of San Bernardino CUPA. The HMBP would minimize hazards to human health and the environment from fires, explosions, or an accidental release of hazardous materials into air, soil, surface water, or groundwater. Compliance with all applicable federal, State, and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and preparation and implementation of the HMBP would reduce potential impacts to the public, employees, or the environment related to the transport, use, or disposal of hazardous materials to a less than significant impact.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12” and 72” in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction
Construction impacts would be the same as Project Category 1. Compliance with all applicable federal, State, and local regulations regarding the handling, storage, transportation, and disposal

of hazardous materials, and preparation and implementation of MM **HAZ-6** would reduce potential impacts to the public, employees, or the environment related to the potential upset and/or accident conditions involving the release of hazardous materials to a less than significant impact.

Operation
Operation of the proposed conveyance and ancillary facilities would consist of facilities designed to store, transport, and discharge water. Therefore, hazardous materials would not be associated with the regular operation of these facilities. Therefore, operational impacts would be less than significant.

Project Category 3: Groundwater Storage Increase
This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed modification to the safe storage capacity would have no potential to create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

Project Category 4: AWPF and Other Water Treatment Facilities
This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Construction
Construction impacts would be the same as Project Category 1 and 2. Compliance with all applicable federal, State, and local regulations regarding the handling, storage, transportation, and disposal of hazardous materials, and implementation of the MM **HAZ-6** would reduce potential impacts to the public, employees, or the environment related to the potential upset and/or accident conditions involving the release of hazardous materials to a less than significant impact.

Operations
Operation of the proposed AWPF and wellhead treatment facilities would consist of facilities designed to treat water. Long-term operation of such facilities as AWPF and wellhead treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water and potable water sources prior to distribution. Therefore, implementation of MMs **HAZ-1** through **HAZ-6** are required to minimize potential impacts from accidental release of hazardous materials to a less than significant impact.

Combined Project Categories
Accidental release of hazardous materials could occur during routine transport, storage, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect nearby groundwater or surface water bodies. Future project proponents would be required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the

transport, storage, use, and disposal of hazardous materials during construction and operation of all proposed facilities. Compliance with these laws and implementation of MMs **HAZ-1** through **HAZ-5** above, and the following MM **HAZ-6**, would minimize the potential hazard to the public or environment due to accidental release. With implementation of applicable laws and regulations, as well as MMs **HAZ-1** through **HAZ-6**, potential accidental hazard impacts would be reduced to a less than significant level.

*Mitigation Measures: Mitigation measures **HAZ-1** through **HAZ-5** are required to minimize impacts as well as the following:*

HAZ-6: ***All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the CBP. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.***

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin project area is largely urbanized with residential, commercial, and industrial uses in most areas except southern Chino and Ontario, and Prado Basin. As the project area continues to develop, the addition of more development could create a significant hazard to the public or the environment through potential hazard to the public or environment due to accidental release. However, all cumulative development would be subject to federal, State, and local regulations related to accidental release of hazardous materials. Since the proposed CBP individual projects would result in less than significant impacts related to accidental release of hazardous materials during both construction and operation of CBP facility through the implementation of mitigation, the CBP's contributions to such impacts would be not be cumulatively considerable, and therefore, would not result in a significant cumulative impact.

*Cumulative Measures: Mitigation measures **HAZ-1** through **HAZ-6** are required to minimize cumulative impacts.*

Level of Significance After Mitigation: Less than Significant

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Due to the potentially extensive nature of facilities associated with implementing the proposed wells and ancillary equipment, it is possible that construction of proposed facilities would occur

within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials, such as gasoline and diesel fuel. As a general rule, well and ancillary facility construction activities do not require any acutely hazardous materials. Additionally, a project proponent is required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, State, and local regulations and MMs **HAZ-1** through **HAZ-6** would reduce potential impacts to the public or the environment regarding hazardous waste discharges or emissions within one-quarter mile of a school during construction. Impacts would be less than significant with implementation of mitigation.

Operation of the proposed projects would consist of facilities designed to produce, store, and move water into and out of the groundwater aquifer. With two exceptions, hazardous materials would not be associated with the regular operation of Category 1 facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. One exception is, if during extractions from the Chino Basin, groundwater is treated with chlorine for delivery of the groundwater as potable water. This is most commonly carried out by dosing the extracted water with sodium hypochlorite, a diluted hazardous material. This material would not enter the atmosphere and in the quantities and form used, would not pose a significant hazard for students that may be attending a nearby school. The other material is petroleum product used to support pump stations. In both cases, the established handling protocols per federal, State, and local laws and regulations would ensure operational impacts for Category 1 facilities would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Due to the potentially extensive nature of facilities associated with implementing the proposed pipelines and ancillary facilities, it is possible that construction of proposed facilities would occur within one-quarter mile of a school. Construction activities would use limited quantities of hazardous materials during construction of pipelines and ancillary facilities, such as gasoline and diesel fuel. Additionally, future project proponents would be required to comply with all relevant and applicable Federal, State, and local laws and regulations that pertain to the release of hazardous materials during construction of proposed facilities. Compliance with all applicable federal, State, and local regulations, as well as the implementation of MMs **HAZ-1** through **HAZ-6**, would reduce potential impacts to the public or the environment regarding hazardous waste emissions within one-quarter mile of a school. This is because MM **HAZ-1**, which would ensure proper management upon any incident of accidental release of hazardous materials, would be required, reducing impacts under this issue to a level of less than significant.

Operation of the proposed Project Category 2 projects would consist of facilities designed to store and convey water. Therefore, hazardous materials would not be associated with the regular operation of the facilities, and no hazardous materials would be emitted or handled within one-quarter mile of a school. The one exception to this could be pump stations with backup generators that would require fuels for operation. However, IEUA is required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the release of hazardous materials during operation of proposed facilities. Compliance with all applicable federal, State and

local regulations and MMs **HAZ-1** through **HAZ-6** would reduce potential operational impacts to schools within one-quarter mile of the project sites. Impacts would be less than significant with incorporation of applicable laws and regulations, as well as implementation of mitigation.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed modification to the safe storage capacity would have no potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, and no impact would occur.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Construction

Most of the above facilities are proposed to be implemented at existing facilities or disturbed locations. Most of these locations are not near schools, but where such proximity may occur, the impacts would be comparable to Project Categories 1 and 2, with MMs **HAZ-1** through **HAZ-6** being required to minimize construction impacts.

Operations

Operation of the proposed AWPF and wellhead treatment facilities would consist of facilities designed to treat water. Long-term operation of such facilities as AWPF and wellhead treatment plants can require modest quantities of hazardous materials, such as chemicals like chlorine (commonly in the form of sodium hypochlorite) to treat recycled water and potable water sources prior to distribution. Therefore, operational impacts would be potentially significant. Implementation of MMs **HAZ-1** through **HAZ-6** would be required to reduce potential impacts from accidental release of hazardous materials to less than significant levels.

Combined Project Categories

It is possible for many of the above facilities to be constructed within one quarter-mile of a school. Because construction activities would use limited quantities of hazardous materials and would be required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the release of hazardous materials, impacts would be less than significant with the implementation of mitigation. Furthermore, hazardous materials would be associated with the regular operation of the facilities within one-quarter mile of a school. Because operation activities would use limited quantities of hazardous materials and would be required to comply with all relevant and applicable federal, State, and local laws and regulations that pertain to the release of hazardous materials during use, impacts would be less than significant. Therefore, operational impacts would be less than significant with implementation of MMs **HAZ-1** through **HAZ-6**.

Level of Significance Before Mitigation: Potentially Significant.

*Mitigation Measures: Mitigation measures **HAZ-1** through **HAZ-6** are required to minimize project impacts.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The IEUA service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, emissions of hazardous emissions or handling of hazardous materials, substances, and/or waste within one-quarter mile of an existing or proposed school becomes a greater possibility with potential for cumulative impacts to occur. All cumulative development would be subject to federal, State, and local regulations related to the routine transportation, use, storage, and disposal of hazardous materials, including the proposed CBP. With compliance with the regulatory framework, as well as through implementation of MMs **HAZ-1** through **HAZ-6**, which would further reduce potential hazard related impacts, cumulative impacts would not be significant and the proposed CBP projects contributions would not be cumulatively considerable.

Level of Significance Before Mitigation: Less than Significant.

*Cumulative Measures: Mitigation measures **HAZ-1** through **HAZ-6** would reduce the project's contribution to this less than significant cumulative impact.*

Level of Significance After Mitigation: Less Than Significant

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9)

The hazardous sites analysis undertaken for this program, including records searches on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin; however, there are no hazardous waste sites identified within or adjacent to the IEUA treatment facilities' sites. Within the Chino Basin, the contaminated locations can be divided into two categories. First, there are known surface contaminated sites, which are generally limited in area. Second, there are larger legacy contamination sites that have caused extensive groundwater contamination plumes, such as the GE Flatiron plume. These larger known contaminated areas are not being evaluated in this section of the DPEIR. They will be evaluated in the DPEIR under the Hydrology and Water Quality section because of the potential for future CBP activities to cause significant adverse impacts to these contaminated areas.

Regarding the smaller, discrete surface contamination sites, the lack of specific locations for future wells and ancillary facilities makes it speculative at this time to forecast potential conflicts

or impacts between Project Category 1 uses and contaminated sites. However, given that there is a potential for sites to be located on agricultural land, soil may be contaminated with unacceptable concentrations of pesticides or herbicides that may be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law. Therefore, mitigation would be implemented to prevent future site-specific impacts for Project Category 1 facilities. Two mitigation measures (**HAZ-7** and **HAZ-8**) would be implemented to ensure that Project Category 1 facilities are not located on contaminated sites. These measures can be readily implemented since the Project Category 1 sites are small (typically 0.5 acre or less) and, with rare exceptions, need not be located at a specific site.

Occasionally, a project that involves subsurface excavation or exploration may encounter an unknown contaminated site. Once encountered, there are existing protocols to address such contamination. Additionally, the MM **HAZ-8** shall be implemented to ensure such contamination would not cause harm to employees or the surrounding environment.

With implementation of mitigation measures, potential conflicts with contaminated sites can be reduced to a less than significant impact level for future CBP facilities.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The hazardous sites analysis undertaken for this project, including records search on the SWRCB GeoTracker and the DTSC EnviroStor databases, revealed multiple listed and active sites within the Chino Basin. The proposed CBP projects would include construction of pipelines and ancillary facilities throughout the Chino Basin. During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Such impacts would be potentially significant. In addition to implementing MMs **HAZ-7** and **HAZ-8**, which would address avoiding known contaminated sites and encounters with unknown contamination, notification of regulatory agencies and following their guidance would ensure CBP facilities would have a less than significant impact related to contaminated sites.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. While the groundwater Basin itself has a potential to experience impacts from surficial or groundwater hazards within the Basin, these impacts are assessed on a continuous basis as a result of ongoing monitoring efforts. Ultimately, the discussion of groundwater quality impacts from implementing the CBP is outlined in Subchapter 4.11, Hydrology and Water Quality,

as this issue is of paramount importance within the Basin, and infrastructure projects such as the CBP within the Basin must ensure that movement of the contamination plumes identified in Subsection **4.10.2**, above, is contained to minimize contamination of groundwater at wells located in proximity, but outside these plumes. The analysis contained in Subchapter 4.11, Hydrology and Water Quality, determined that the proposed CBP would not result in significant movement of the groundwater plumes within the Basin. However, MM **HYD-7** addresses the plan of response by Watermaster and the IEUA should the Basin conditions come to vary from the projections that have been modeled as part of the CBP planning. This measure would enable Watermaster to modify previously agreed upon mitigation measures to address actual Basin conditions and apply these measures to the CBP allowing for flexibility in how Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels. Furthermore, as part of Watermaster's review of the IEUA's Storage and Recovery Program application for the CBP, the effects of the CBP operations on the movement of major contaminant plumes in the Chino Basin will be re-assessed. If Watermaster determines that the CBP operations may result in significant impacts to the movement of the plumes, Watermaster will require that the IEUA implement mitigation (enforced through MM **HYD-7**) to reduce their impacts to less than significant levels.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 does not have any known contaminated locations within its boundaries. Therefore, modifications to this facility in support of the CBP would pose no potential for adverse impacts to employees or environment. This finding is generally valid for individual existing well sites where new wellhead treatment facilities may be installed. With regard to the proposed wellhead treatment facilities that may be located outside existing facilities, impacts would be the same as Project Categories 1 and 2. Therefore, construction and operation of this type of facility would not result in a significant hazard to the public or environment with implementation of MMs **HAZ-7** and **HAZ-8**. Impacts would be less than significant with mitigation.

Combined Project Categories

During project construction, it is possible that contaminated soil and/or groundwater could be encountered during excavation, thereby posing a health threat to construction workers, the public, and the environment. Impacts would be potentially significant. The implementation of MMs **HAZ-7** and **HAZ-8** would require site-specific studies to identify known hazardous materials risks or the potential for risk related to hazardous materials. These studies would identify recommendations and cleanup measures to reduce risk to the public and the environment from development on hazardous materials sites. Implementation of MMs **HAZ-7** and **HAZ-8** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils. Therefore, impacts to the public and the environment related to hazardous materials sites would be less than significant with implementation of mitigation.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of MM **HYD-7** is required to reduce impacts below significance thresholds, in addition to MM **HAZ-7** and **HAZ-8**, below.*

HAZ-7: Prior to final site selection for future CBP facilities, IEUA shall obtain a Phase I Environmental Site Assessment (ESA) for the selected site. If a site contains contamination, the agency shall either avoid the site by selecting an alternative location

or shall remove any contamination at the site (remediate) to a level of concentration that eliminates hazard to employees working at the site and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law.

HAZ-8: ***Should an unknown contaminated site be encountered during construction of CBP facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local Certified Unified Program Agency or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the Certified Unified Program Agency or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.***

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the region continues to develop, the addition of developments could be located on sites that are included on a list of hazardous materials sites and as a result, could create significant hazards to the public or the environment. Since the proposed CBP projects could be constructed on current hazardous material sites or unknown contaminated sites, impacts would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact. The implementation of MMs **HAZ-7** and **HAZ-8** would ensure that the proposed facilities' contribution to cumulative development on hazardous materials sites would be reduced to less than cumulatively considerable by requiring site-specific studies to identify known hazardous materials risks or the potential for risks related to hazardous materials and affected soils and groundwater. These studies would include recommendations and cleanup measures to reduce risk to the public and the environment from development on contaminated sites. As stated above, MM **HYD-7** addresses the plan of response by Watermaster and the IEUA should Basin conditions come to vary from the projections that have been modeled as part of the CBP planning. As such, if Watermaster determines that the CBP operations may result in significant impacts to the movement of the plumes, thereby threatening water quality, Watermaster will require that the IEUA implement mitigation (enforced through MM **HYD-7**) to reduce their impacts to less than significant levels. Implementation of MMs **HAZ-7, HAZ-8,** and **HYD-7** would reduce potential impacts to construction workers and the public from exposure to unknown affected soils such that the proposed project would not contribute to significant cumulatively considerable impacts.

*Cumulative Measures: Mitigation measures **HAZ-7, HAZ-8,** and **HYD-7** are required to minimize project impacts.*

Level of Significance After Mitigation: Less Than Significant

e) Would the project, for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?

The following three airports are located within the Chino Basin boundaries: Chino Airport, LA/Ontario International Airport, and Cable Airport. There are no private airstrips located within the Chino Basin.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Project Category 1 facilities would be low to the ground and any small structures would be uninhabited. Although no specific Project Category 1 facilities are proposed within any airport safety zone or flight paths, the proposed wells to be located in and around Ontario could be installed within the Ontario Airport's safety zone and flight path, excluding of course the runway protection zone. Other wells and ancillary facilities could be installed in similar areas at in the vicinity of the Chino and Cable Airports. During construction of facilities in close proximity to airports, there is a potential for workers at the site to be exposed to hazards from nearby airports. Construction contractors would be required to comply with Cal/OSHA regulations related to exposure to airport hazards, such as noise. The requisite adherence to these regulations would reduce construction worker exposure to airport-proximity related hazards such as noise, such that proposed CBP construction activities would not expose employees to airport safety hazards. Construction impacts across all project categories related to airport and aircraft hazards would be less than significant, and no mitigation is required.

Although CBP Project Category 1 facilities would not pose any specific conflict with any public airport operations, mitigation is provided to ensure airport operators have an opportunity to participate in a decision to locate CBP facilities within safety zone or flight paths. With implementation of MM **HAZ-9**, conflicts between CBP Category 1 facilities and airports would be reduced to a less than significant impact level.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Pipelines are anticipated to be constructed below the ground surface within existing public rights-of-way, and as such, no operational impacts pertaining to airports would occur. Construction of pipelines would have the same impacts identified under Project Category 1, above. Furthermore, Project Category 2 facilities are anticipated to be unmanned and therefore would not put any workers at risk, except where maintenance is required. Some ancillary facilities' locations (for reservoirs and pump stations) have not yet been determined, and therefore, have the potential to be within an airport land use planning area. Ancillary facilities could result in a safety hazard to airport flight patterns, light, or navigation. Therefore, potential airport hazard impacts could be potentially significant. Implementation of MM **HAZ-9** would ensure that Project Category 2 facilities would not conflict with airport operations and impacts would be less than significant.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed project would have no potential to, as a result of proximity to an airport, result in a safety hazard for people residing or working in the project area and no impact would occur.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 would be located outside of the designated Ontario International Airport safety zones as RP-4 is located northeast of the airport at a distance of about 3.5 miles from the airport runway.

As with Project Category 1 and 2 facilities, the locations for the proposed wellhead treatment facilities are presently unknown. Although these facilities would not be installed to be of great height, the wellhead treatment facilities could be installed in and around the airports located within the CBP project area. Construction of these facilities would have the same impacts identified under Project Category 1, above.

Although CBP Project Category 4 facilities would not pose any specific conflict with any public airport operations, mitigation is provided to ensure airport operators would have an opportunity to participate in a decision to locate CBP facilities within safety zone or flight paths. With implementation of MM **HAZ-9**, conflicts between Project Category 4 facilities and airports can be reduced to a less than significant impact level.

Combined Project Categories

Most proposed projects' locations have not yet been determined, and therefore, would have the potential to be within an airport land use plan area, which in turn could result in a safety hazard for people residing or working in the project area. Therefore, airport hazard impacts could be potentially significant. The implementation of MM **HAZ-9** would ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area during construction and operation of the CBP projects. Implementation of MM **HAZ-9** would reduce potential impacts from development within an airport safety zone to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HAZ-9: ***Prior to finalizing site selection of a CBP facility within an airport safety zone, input from the affected airport management entity shall be solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use***

compatibility plan. If a potential conflict with an airport land use compatibility plan is identified, IEUA shall relocate the facility outside the area of conflict, or if the site is deemed essential, IEUA shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis
Implementation of MM **HAZ-9** and compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies would ensure that the proposed facilities would not contribute to cumulative impacts, significant or otherwise, related to development within airport safety zones.

*Cumulative Measures: Implementation of Mitigation Measure **HAZ-9** is required.*

Level of Significance After Mitigation: Less Than Significant

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

All project facilities under Project Category 1 would be contained within the boundaries of their specific sites which would not include any roadways. Project-related vehicles would not block existing street access to the project sites. Therefore, no impacts related to an adopted emergency response plan or emergency evacuation plan would occur from installation and operation of Project Category 1 CBP facilities.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities would consist of wells and ancillary infrastructure which, during operation, would not interfere with traffic flows. However, aboveground facilities would require periodic maintenance. Maintenance activities would be intermittent and require minimal trips on surrounding roadways. Impacts related to an adopted emergency plan would be less than significant during operation.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12” and 72” in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The pipeline and aboveground facility installations would require construction along or in public roadways and could interfere with an adopted emergency response plan or emergency evacuation plan. All proposed pipelines would be constructed within public rights-of-way. This

construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts could be potentially significant. MMs **TRAN-1** and **WF-1**, identified under Subchapters 4.18 and 4.21, respectively, would be required.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips on the surrounding roadways. Impacts related to an adopted emergency plan would be less than significant during operation.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no conflicts with an adopted emergency response or evaluation plan are anticipated to occur.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF and wellhead treatment facilities would not impair implementation of or physically interfere with adopted emergency response plans or emergency evacuation plans. There would be no installation of pipelines or other facilities within rights-of-way surrounding the project sites, making the possibility of interfering with evacuation routes highly unlikely. The truck trips associated with construction activities at the AWPF and wellhead treatment facilities would not require closure of any roadways and would only temporary slow traffic near project sites. All project facilities would be contained within the boundaries of the project sites, and project-related vehicles would not block existing street access to the sites. Therefore, no impact related to an emergency evacuation plan would occur during construction.

Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. The facilities consist of an AWPF and wellhead treatment facilities, operation of which would not interfere with traffic flows. Operation of the AWPF would require on-site personnel, resulting in daily trips to the RP-4 AWPF site. As this site currently receives daily trips as a result of operation of the RP-4 wastewater treatment facility, additional trips associated with the AWPF in support of operational activities are not anticipated to conflict with the surrounding roadways such that a significant impact to emergency response and evacuation plants would occur. Impacts related to an adopted emergency or evacuation plan would be less than significant during operation.

Combined Project Categories

Project Category 2 proposed pipelines would be constructed within public rights-of-way. This construction activity, and other anticipated construction activities associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be potentially significant. The implementation of MMs **TRAN-1** and **WF-1**, identified under Subchapters 4.18 and 4.21, respectively, would require the preparation of a Transportation Management Plan with comprehensive strategies to reduce potential disruption to emergency evacuation or an emergency response plan. Therefore, potential significant impacts to emergency access and evacuation would be reduced to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of MMs **WF-1** and **TRAN-1** are required to reduce impacts under this issue below significance thresholds.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan by constructing facilities within public rights-of-way. Since the proposed CBP pipelines would be constructed within public rights-of-way, the proposed project's contribution to the cumulative impact related to area construction would be considerable. The implementation of MMs **TRAN-1** and **WF-1** would ensure that the proposed facilities' contribution to cumulative emergency access and evacuation impacts would be reduced to less than cumulatively considerable by requiring the preparation of a Transportation Management Plan with comprehensive strategies to reduce disruption to emergency access and evacuation.

*Cumulative Measures: Implementation of Mitigation Measures **TRAN-1** and **WF-1** are required.*

Level of Significance After Mitigation: Less Than Significant

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The highly urbanized portion of the Chino Basin has been designated by CAL FIRE as outside of the very high FHSZ. This is shown on the attached wildland FHSZ maps. Almost all "high" or "severe" wildland FHSZs are located on the edges of the Chino Basin, or adjacent to isolated hills (Jurupa Hills) that interrupt the slope of the Chino Basin alluvial fan. As described below, both the unmanned infrastructure proposed by the CBP and the location of this infrastructure occur in areas with, at most, moderate wildland fire hazards.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Proposed Project Category 1 projects would generally not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose people or structures to wildfire risks. Where the well or ancillary facilities would be located on developed land, CAL FIRE generally designates these areas as outside of the very high FHSZ. However, if Project Category 1 infrastructure must be installed within very high FHSZs, a potential exists to cause a significant wildfire hazard. MM **HAZ-10** is required to address this circumstance and reduce the impact to a less than significant level.

During operation, the proposed facilities would function to recharge, pump, and distribute water throughout the Chino Basin, and these facilities would not be constructed of flammable materials or involve any spark-producing activities, or human occupancy. Therefore, operational impacts of the proposed plan facilities would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed pipelines and ancillary facilities would be constructed primarily within paved roadway rights-of-way. CAL FIRE designates most of the areas within the Chino Basin as outside the very high FHSZs but some very high FHSZs are in Chino Hills, Upland, Rancho Cucamonga, Fontana, and Jurupa Hills primarily around foothills containing wildlands near the boundaries of the Basin. Because most of the ancillary facilities' locations have not been determined at this time, there is a potential for facilities to be located within or near wildland areas with high fire risk. The use of spark-producing construction machinery within a fire risk area could create hazardous fire conditions and expose construction workers to wildfire risks. Impacts would be potentially significant, unless MM **WF-2** is implemented.

During operation, the proposed facilities would distribute recycled, imported, and treated water throughout the project area, and these facilities would not be constructed of flammable materials or involve any spark-producing activities. However, many of the ancillary facilities would be supplied and operate on electricity. Therefore, MM **WF-2** shall be implemented for these facilities in high and very high FHSZs. All ancillary facilities, such as pump stations, would be unmanned and would only require routine maintenance; therefore, no people would be exposed to a significant risk involving wildland fires. Operational impacts of the proposed CBP facilities would be less than significant with implementation of MM **WF-2**.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed increase in safe storage capacity would have no

potential to expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF would be located at RP-4, which is not located within a very high FHSZ. It is possible that the proposed wellhead treatment systems could be located in the northern portion of the Chino Basin in a high or very high FHSZ. Therefore, MM **WF-2** would be required to reduce potential wildland fire hazard impacts to a less than significant impact level.

Combined Project Categories

Some proposed project locations are not determined at this time, and therefore, there would be potential for facilities to be located within or near a wildland area with high fire risk. Impacts would be potentially significant and require implementation of MM **WF-2**. The implementation of MM **WF-2** would require the preparation of a fire management plan/fuel modification plan for CBP infrastructure proposed within very high FHSZs, and it would identify comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential significant impacts due to installation of proposed CBP infrastructure would be reduced to less than significant level with implementation of MM **WF-2**.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of Mitigation Measure **WF-2** is required.*

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the service area continues to develop, the addition of more development could expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Since there would be potential for CBP projects to be located within or adjacent to areas with high wildland fire risks, impacts from the CBP projects would be cumulatively considerable and therefore, would result in a potentially significant cumulative impact. The implementation of MM **WF-2** would ensure that the proposed facilities' contribution to cumulative impacts related to wildfires would not be cumulatively considerable by implementing fire hazard reduction measures during construction and operations in areas designated as very high FHSZs to reduce the potential for wildfire impacts on people or structures.

*Cumulative Measures: Mitigation Measure **WF-2** is required to minimize project impacts.*

Level of Significance After Mitigation: Less Than Significant

4.10.6 Mitigation Measures

To minimize future impacts related to hazards and hazardous materials from project implementation, the following mitigation measures will be implemented. These measures will

minimize potential hazard related impacts from occurring as a result of implementation of the proposed project.

HAZ-1: ***For CBP facilities that handle hazardous materials or generate hazardous waste, the Hazardous Materials Business Plan prepared and submitted to the Certified Unified Program Agency shall incorporate best management practices designed to minimize the potential for accidental release of such chemicals and shall meet the standards required by California law for Hazardous Materials Business Plans. The facility managers shall implement these measures to reduce the potential for accidental releases of hazardous materials or wastes. The Hazardous Materials Business Plan shall be approved prior to operation of the given facility.***

HAZ-2: ***The Hazardous Materials Business Plan shall assess the potential accidental release scenarios and identify the equipment and response capabilities required to provide immediate containment, control, and collection of any released hazardous material. Prior to issuance of the certificate of occupancy, each facility shall ensure that necessary equipment has been installed and training of personnel has occurred to obtain sufficient resources to control and prevent the spread of any accidentally released hazardous or toxic materials.***

HAZ-3: ***Prior to occupancy of any site for which storage of any acutely hazardous material will be required, such as chlorine gas, modeling of pathways of release and potential exposure of the public to any released hazardous material shall be completed and specific measures, such as secondary containment, shall be implemented to ensure that sensitive receptors will not be exposed to significant health threats based on the toxic substance involved.***

HAZ-4: ***All hazardous materials during both operation and construction of CBP Facilities shall be delivered to a licensed treatment, disposal, or recycling facility and be disposed of in accordance with State and federal law.***

HAZ-5: ***Before determining that an area contaminated as a result of an accidental release during project operation or construction is fully remediated, specific thresholds of acceptable clean-up shall be established and sufficient samples shall be taken and tested within the contaminated area to verify that these clean-up thresholds have been met in compliance with State and federal law.***

HAZ-6: ***All accidental spills or discharge of hazardous material during construction activities shall be reported to the Certified Unified Program Agency and shall be remediated in compliance with applicable federal, State, and local regulations regarding cleanup and disposal of the contaminant released. The contaminated waste shall be collected and disposed of at a licensed disposal or treatment facility. This measure shall be incorporated into the Stormwater Pollution Prevention Plan (SWPPP) prepared or each future facility developed under the CBP. Prior to accepting the site as remediated, the area contaminated shall be tested to verify that any residual concentrations meet the standard for future residential or public use of the site.***

HAZ-7: ***Prior to final site selection for future CBP facilities, IEUA shall obtain a Phase I Environmental Site Assessment (ESA) for the selected site. If a site contains contamination, the agency shall either avoid the site by selecting an alternative location or shall remove any contamination at the site (remediate) to a level of concentration that eliminates hazard to employees working at the site and that will not conflict with the installation and future operation of the facility. For sites located on agricultural land, this can include soil contaminated with unacceptable concentrations of pesticides or herbicides that shall be remediated through removal or blending to reduce concentrations***

below thresholds of significance established for the particular pesticide or herbicide in compliance with State and federal law.

HAZ-8: ***Should an unknown contaminated site be encountered during construction of CBP facilities, all work in the immediate area shall cease; the type of contamination and its extent shall be determined; and the local Certified Unified Program Agency or other regulatory agencies (such as the DTSC or Regional Board) shall be notified. Based on investigations of the contamination, the site may be closed and avoided or the contaminant(s) shall be remediated to a threshold acceptable to the Certified Unified Program Agency or other regulatory agency threshold and any contaminated soil or other material shall be delivered to an authorized treatment or disposal site.***

HAZ-9: ***Prior to finalizing site selection of a CBP facility within an airport safety zone, input from the affected airport management entity shall be solicited. For projects within airport safety zones, facility design shall follow the guidelines of the appropriate airport land use compatibility plan. If a potential conflict with an airport land use compatibility plan is identified, IEUA shall relocate the facility outside the area of conflict, or if the site is deemed essential, IEUA shall propose an alternative design that reduces any conflict to a less than significant level of conflict. As an example, a pump station or reservoir could be installed below ground instead of above ground.***

HYD-7: ***Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected Basin conditions assumed in the evaluation of the CBP Storage and Recovery Program application process, compare the projected CBP operations to actual operations. Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the CBP storage agreement. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the CBP storage agreement that will adequately mitigate MPI and related adverse impacts including but not limited to pumping sustainability, net recharge and safe yield, subsidence, hydraulic control, and groundwater quality.***

TRAN-1 ***Prepare and Implement Construction Transportation Management Plan***
A construction Transportation Management Plan (TMP) shall be developed and implemented by IEUA in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

<u>Construction Traffic Routes and Staging Locations:</u> The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.

<u>Damage Repair:</u> The TMP shall include the following requirements to minimize damage to the existing roadway network:

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall***

be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water conveyance pipelines.

- ***The roadway network along the proposed water distribution alignment(s) shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and IEUA or its contractors shall repair all damage.***

Coordination with Emergency Services: ***The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments, ambulance services, and paramedic services at least one week prior to the start of work within public rights-of-way if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.***

Coordination with Active Transportation Facilities: ***The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.***

Coordination with SBCTA: ***If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with SBCTA and Metrolink.***

Coordination with Caltrans: ***If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.***

Coordination with Nearby Construction Sites: ***The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:***

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips***
- ***IEUA, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

Transportation Control and Safety: ***The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.***

Plan Approval: ***The TMP shall be submitted to SBCTA and the respective city community development departments for review and approval.***

WF-1*:* ***Prior to initiating construction of proposed facilities within public rights-of-way (ROW), IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where***

necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW.

WF-2: ***Prior to construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (FHSZs) by CAL FIRE, fire hazard reduction measures shall be incorporated into a fire management plan/fuel modification plan for the proposed facility, and shall be implemented during construction and over the long-term for protection of the site. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that can include a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site shall have access to functional fire extinguishers and related fire prevention equipment (such as emergency sand bags, etc.) at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by the IEUA and provided to CAL FIRE for review and comment, where appropriate, and approved prior to construction within high and very high FHSZs and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high FHSZ to minimize fire exposure and damage to a level acceptable to the IEUA over the long-term.***

Implementation of these measures will reduce potential hazards and hazardous materials impacts to a less than significant impact level.

4.10.7 Cumulative Impacts

The cumulative analysis of each Hazards and Hazardous Materials issue evaluated in this Subchapter (4.10) of the DPEIR determined that the proposed project would not result in a cumulatively considerable contribution to cumulative hazards and hazardous materials impacts within the Chino Basin as a result of implementation of mitigation measures. While cumulative development within the region may result in significant cumulative impacts related to exposure to hazards, the potential for the proposed CBP to result in a cumulatively considerable contribution to such impacts has been minimized to a level of insignificance through the implementation of mitigation measures.

4.10.8 Significant and Unavoidable Impacts

As determined in the preceding evaluation, with the implementation of mitigation, the proposed project would not result in any significant and unavoidable adverse hazard and hazardous materials impacts.

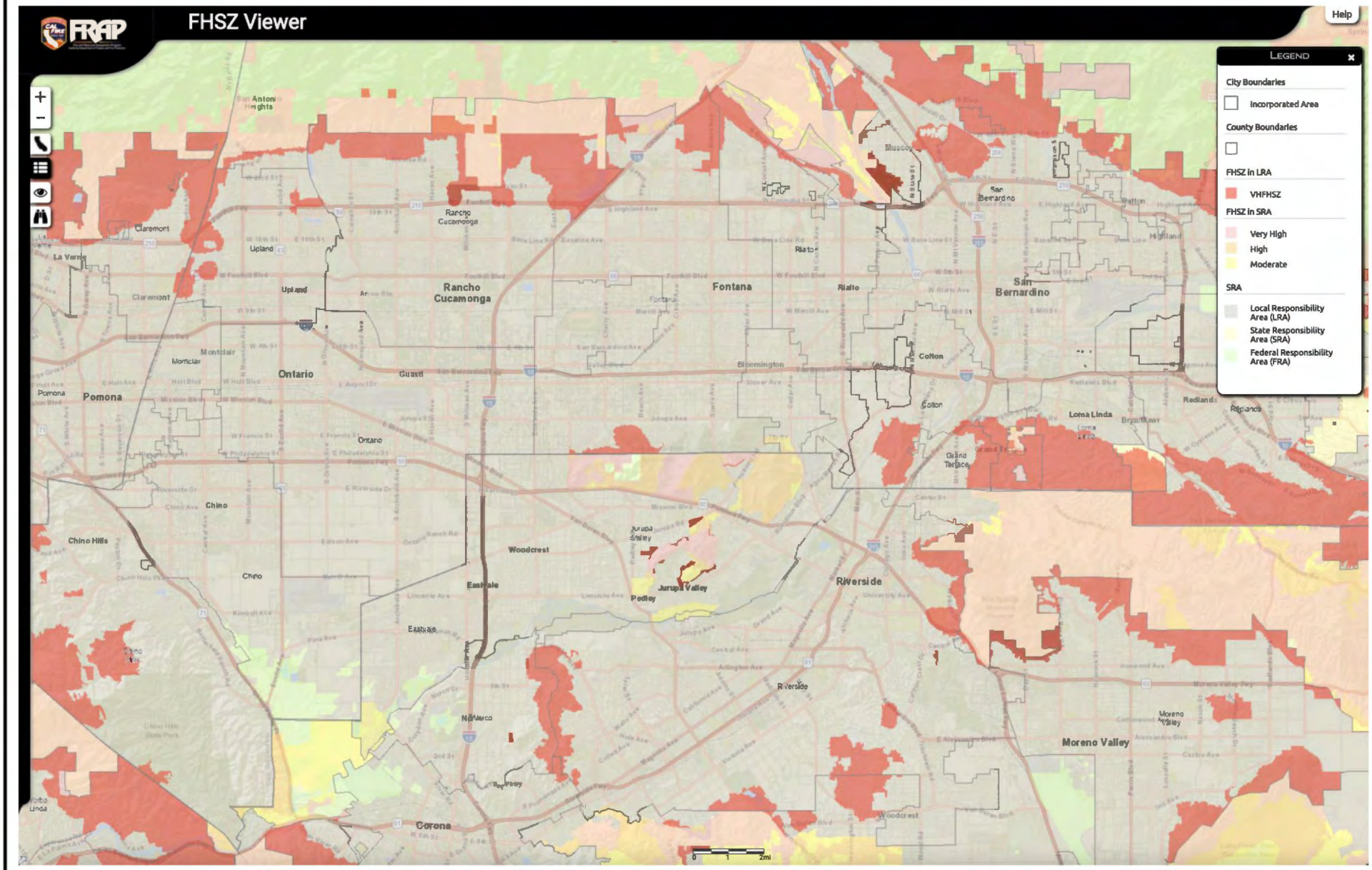


FIGURE 4.10-1

Tom Dodson & Associates
Environmental Consultants

Fire Hazard Severity Zone in the SRA and LRA

4.11 HYDROLOGY AND WATER QUALITY

4.11.1 Introduction

This Subchapter will evaluate the environmental impacts to the issue areas of Hydrology (watershed, drainage and flood hazards) and Water Quality from implementation of the proposed Chino Basin Program (CBP). This section will evaluate the available information about the background hydrology and water quality and forecast the type of impacts that may occur, including identification of mitigation measures that can ensure potential impacts from constructing and operating the various components of the CBP can be reduced to the minimum level achievable consistent with meeting project objectives.

The implementation of the facilities proposed as part of the CBP consists of construction and operation of the various facilities supporting the PUT (the components to recharge purified water to the Chino Basin) and TAKE cycles (the components to extract groundwater and convey potable water supply) that make up the CBP. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development and Monitoring Devices; (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Storage Basins, Recharge Facilities, and Storage Bands; and, (4) Desalters and Water Treatment Facilities.

These issues pertaining to hydrology and water quality will be discussed below under the following framework:

- Introduction
- Environmental Setting: Hydrology and Water Quality
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Unavoidable Adverse Impacts

The following reference documents were used in preparing this section of the DPEIR.

- California Regional Water Quality Control Board, Santa Ana Region. (2008). Water Quality Control Plan Santa Ana River Basin (Region 8) 1995. Updated February 2008.
- FEMA, Map Service Center, Accessed 10/6/21 at: https://msc.fema.gov/portal/home
- Pollock, D. (2016). *User guide for MODPATH Version 7—A particle-tracking model for MODFLOW: U.S. Geological Survey Open-File Report 2016-1086*.
- San Bernardino County, *San Bernardino Countywide Plan*, November 2, 2020
- Santa Ana River Watermaster. (2020). Forty Seventh Annual Report of the Santa Ana River Watermaster for Water Year October 1, 2018 – September 30, 2019. Prepared for Orange County Water District v. City of Chino, et al. Case No. 117628 – County of Orange
- Tom Dodson & Associates (TDA), *Optimum Basin Management Program Addendum No. 2*, March 2021. Prepared on behalf of Watermaster and IEUA. Accessible at: https://cbwm.syncedtool.com/shares/folder/9abb162877b999/?folder_id=1055
- West Yost. *2020 State of the Basin Report*. June 2021. (Appendix 10a, Volume 2 to this DPEIR)
- West Yost. *Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program.* October 15, 2021 (Appendix 4, Volume 2 to this DPEIR)
- West Yost. *2020 Chino Basin Maximum Benefit Annual Report*. April 2021. (Appendix 10b, Volume 2 to this DPEIR)
- Wildermuth Environmental, Inc., 1999. *Optimum Basin Management Program Phase I Report. Prepared for the Chino Basin Watermaster.*
- Wildermuth Environmental, Inc. 2003. *Optimum Basin Management Program, Chino Basin Dry-Year Yield Program, Preliminary Modeling Report, Chino Basin Watermaster.* July 2003.

- Wildermuth Environmental, Inc. 2007. *2007 CBWM Groundwater Model Documentation and Evaluation of the Peace II Project Description*. Prepared for the Chino Basin Watermaster. November 2007.
- Wildermuth Environmental, Inc. 2013. *Optimum Basin Management Program 2012 State of the Basin Atlas*. Prepared for the Chino Basin Watermaster. June 2013.
- Wildermuth Environmental, Inc. 2014. *TIN/TDS: Recomputation of Ambient Water Quality in the Santa Ana Watershed for the Period 1993 to 2012*. Technical Memorandum. August 2014.
- Wildermuth Environmental, Inc. 2015. *Optimum Basin Management Program Chino Basin Maximum Benefit Annual Report*. Prepared for Chino Basin Watermaster April 2015.
- Wildermuth Environmental, Inc. 2018. 2018 Recharge Master Plan Update. Prepared for Chino Basin Watermaster and the Inland Empire Utilities Authority. September 2018.
- Wildermuth Environmental, Inc. 2020. *2020 Safe Yield Recalculation Report*. Prepared for the Chino Basin Watermaster. May 2020.

No comments pertaining to noise were received at the Scoping Meeting held on behalf of the project. Two comment specific to this topic were received in response to the Notice of Preparation.

Comment Letter #3 from the San Bernardino County Department of Public Works (dated 10/12/21) states:

- *Impacts associated with the project's occurrence in the Flood Zones mentioned and mitigation, should be discussed within the Draft EA prior to adoption by the IEUA.*
- *IEUA enforce, at a minimum, the most current FEMA regulations for construction within a Special Flood Hazard Area (SFHA) and coordinate the Project with the U.S. Army Corps. of Engineers (USACOE) within the Prado Dam Inundation area.*

Comment Letter #6 from the California Department of Fish and Wildlife (CDFW) (dated 10/14/21) states:

- *CDFW strongly encourages that future climate or demographic changes that will affect the sustainable management of a groundwater basin, as well as environmental uses and the hydrologic links between surface and groundwater be incorporated.*
- *CDFW recommends that IEUA utilize the Basin Technical Advisory Committee (BTAC) findings and continue to collaborate to ensure groundwater and surface water impacts are adequately evaluated and considered.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

Information contained in this Subchapter is supported by the "Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program" and the "Addendum to the Evaluation of the Chino Basin Program/ Water Storage Investment Program," both dated October 15, 2021 and prepared by West Yost (West Yost TM). The West Yost TM and Addendum are provided as Appendix 4, Volume 2 to this DPEIR.

4.11.2 Environmental Setting: Chino Basin Hydrology

The basic hydrology information presented herein is abstracted from the "2020 State of the Basin Report," (2020 Report) published in June 2021 by West Yost on behalf of the Chino Basin Watermaster (Watermaster). The 2020 Report is provided as Appendix 10a of Volume 2 to this DPEIR.

4.11.2.1 Precipitation

Precipitation is a major source of groundwater recharge for the Chino Basin through the deep infiltration of precipitation, applied water and stormwater recharge in streams and recharge facilities. The chart below shows the long-term annual precipitation time series. These annual precipitation estimates are based on the area average over the Chino Basin, created from gridded monthly precipitation estimates prepared by the PRISM Climate Group and covers the period 1895 through 2020. The annual precipitation estimates cover the fiscal year (FY) (July through June). The chart contains a horizontal line indicating the 125-year average annual precipitation of 16.4 inches, and it contains the cumulative departure from mean (CDFM) precipitation. The CDFM plot is a useful way to characterize the occurrence and magnitude of wet and dry periods: positive sloping segments (trending upward from left to right) indicate wet periods, and negative sloping segments (trending downward from left to right) indicate dry periods. The wet and dry periods are labeled at the bottom of the chart. On average, the ratio of dry years to wet years is about three to two. That is, for every ten years, about six years will experience below average precipitation and four years will experience greater than average precipitation. 1945 through 1976 was a 32-year dry period, punctuated by five years of above average precipitation: a dry-to-wet year ratio of about six to one. The period 1999 through 2020 was a 22-year dry period punctuated with six wet years: a dry-to-wet year ratio of about eight to three. Dry periods tend to be long and very dry and wet periods tend to relatively shorter and very wet (see for example 1936 through 1944, 1977 through 1985 and 1993 through 1998).

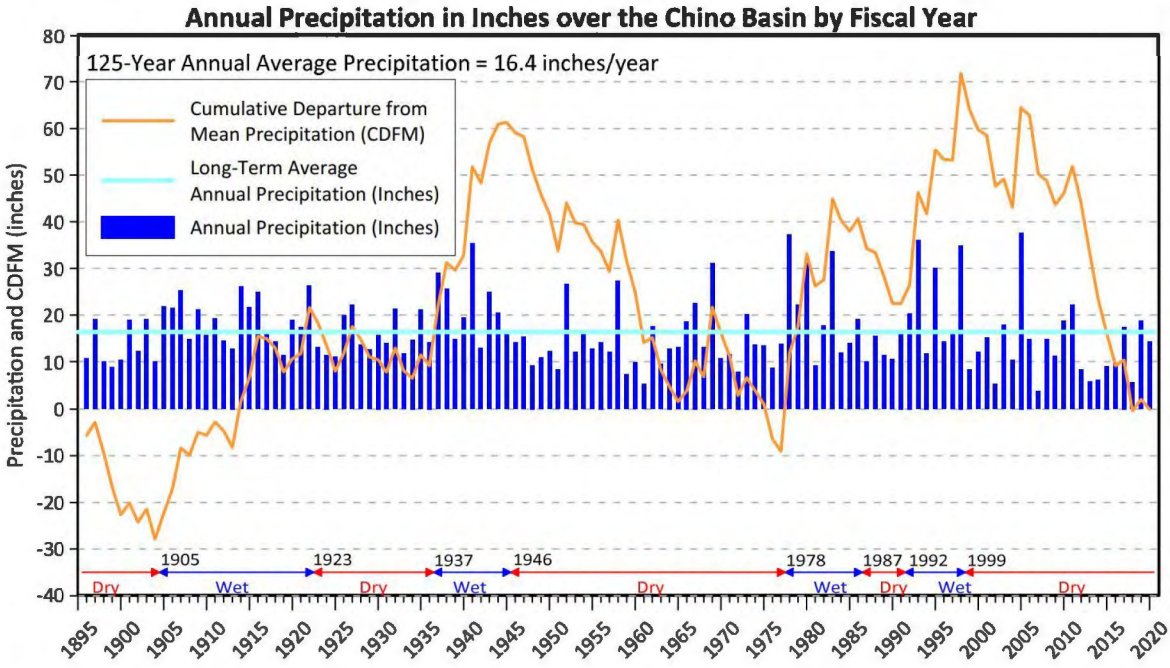


EXHIBIT 4.11-1: ANNUAL PRECIPITATION IN INCHES OVER THE CHINO BASIN BY FISCAL YEAR

4.11.2.2 Surface Water

Figure 4.11-1 shows the location of the Chino Basin within the Upper Santa Ana River watershed and the locations of two key stream-gaging stations in the Chino Basin. Daily discharge data measured at the USGS gaging stations on the Santa Ana River at MWD Xing (USGS Station

11066460) and at the Santa Ana River at Below Prado Dam (USGS Station 11074000) can be used to characterize the discharge of the Santa Ana River as it enters and exits the Chino Basin. Santa Ana River discharge is composed of storm flow and base flow. Storm flow is discharge that is the direct result of runoff from precipitation. Base flow is the difference between the total measured discharge and storm flow, and it primarily consists of discharge from wastewater treatment plants and rising groundwater. Specifically, the summary of the 1969 stipulated judgment[1,2] (Judgment) provides the definition of flows:

> "Storm Flow: That portion of the total flow which originates from precipitation and runoff and which passes a point of measurement (either Riverside Narrows or Prado Dam) without having first percolated to groundwater storage in the zone of saturation, calculated in accordance with procedures referred to in the Judgment."
>
> "Base Flow: That portion of the total surface flow passing a point of measurement (either Riverside Narrows of Prado Dam) which remains after deduction of storm flow, non-tributary flows, exchange water purchased by OCWD, and certain other flows as determined by the (Santa Ana River) Watermaster."

Figure 4.11-1 shows the locations of the USGS gaging stations and the wastewater treatment plant discharges. Base flow is a significant source of recharge to the Chino Basin. **Figure 4.11-1** also shows the annual discharge hydrographs for the Santa Ana River at MWD Xing and at Below Prado Dam. The annual discharge values have been divided into storm and base flows. The base flow time series tends to increase over time, following the conversion of land uses to urban and industrial, until the onset of the great recession in 2008. These land use conversions increased base flow because the urbanized land uses were sewered and the resulting treated wastewater was discharged to the River. After 2008, the base flow decline was caused by decreased water use due to recession and drought and the IEUA increased use of recycled water for direct and indirect uses, thereby reducing its treated wastewater discharges to the River.

Total Santa Ana River base flow entering the Chino Basin at the MWD Crossing (Riverside Narrows) has exceeded 50,000 acre feet per year (AFY) since 1983 except from 1991 to 1995 and from 2009 to 2020. Part of the decrease in base flow at the Riverside Narrows after 2009 is due to a decrease in treated wastewater discharge to the River upstream and falling groundwater levels in the groundwater basins underlying the Santa Ana River upstream, the combined effect of which is a decrease in rising groundwater just upstream of the MWD Crossing.

Total Santa Ana River discharge exiting the Chino Basin at Below Prado Dam has exceeded 100,000 AFY since 1983 except from 2012 to 2018 and 2020. The base flow leaving the Chino Basin is about twice the base flow entering the Basin due to the combined treated wastewater treatment plant discharges of the cities of Corona and Riverside, the IEUA, and the West

[1] The Santa Ana River was adjudicated in the 1960s, and a stipulated judgment was filed in 1969 (OCWD v. City of Chino et al., Case No. 117628, County of Orange). Since the Judgment was filed, the Santa Ana River Watermaster (SARWM) has compiled annual reports.

[2] In 2002, recognizing that implementing the recycled water reuse program would require large-scale treatment and mitigation of salt loading under the then-current antidegradation objectives for TDS and nitrate defined in the Basin Plan, the Watermaster and IEUA petitioned the Regional Board to establish a maximum benefit-based SNMP that involved (1) defining a new groundwater quality management zone that encompasses the northern parts of MZ-1, MZ-2 and MZ-3 called the Chino-North GMZ, (2) establishing TDS and nitrate objectives for the Chino-North GMZ to numerically higher values than established for MZ-1, MZ-2 and MZ-3 to enable maximization of recycled water reuse, and (3) committing to a program of salt and nutrient management activities and projects ("maximum benefit commitments") that ensure the protection of beneficial uses of the Chino-North GMZ and downgradient waters (the Santa Ana River and the Orange County GMZ). The technical work performed to support the maximum benefit SNMP proposal included the development and use of an analytical salt budget tool to project future TDS and nitrate concentrations in the Chino-North GMZ with and without the maximum benefit SNMP. The maximum benefit SNMP was incorporated into the Basin Plan by the Regional Board in January 2004.

Riverside County Wastewater Reclamation Authority. The decrease in base flow exiting the Basin after 2005 is due to the decrease in baseflow entering the Basin at the Riverside Narrows, decreases in treated wastewater discharges due to water conservation and recycled water reuse, and increased streambed infiltration caused by increased groundwater production in the southern Chino Basin.

4.11.2.3 Surface Water Quality

The information summarized herein is from the 2020 Chino Basin Maximum Benefit Annual Report prepared by West Yost for the Watermaster and IEUA dated April 2021. The 2020 Chino Basin Maximum Benefit Annual Report is provided as Appendix 10b of Volume 2 to this DPEIR.

Groundwater generally flows from the forebay regions in the north and east toward the Prado Basin[3], where rising groundwater becomes surface water in the Santa Ana River and its tributaries. Recent and past studies have provided insight into the influence of groundwater pumping in the southern end of the Chino Basin on the Safe Yield of the Basin and the ability of pumping in this part of the Basin to control the discharge of rising groundwater to the Prado Basin and Santa Ana River. Several studies quantify the impacts of the groundwater desalters in the southern Chino Basin on groundwater discharge to the Prado Basin and the Santa Ana River. These studies also indicated that the Chino Basin Desalter program and a slight permanent decrease in Basin storage authorized in the Peace II agreement and approved by the Court will (i) capture groundwater flowing south from the forebay regions of the Chino Basin and (ii) reduce the outflow of high-salinity groundwater to the Santa Ana River, thereby providing greater protection of downstream beneficial uses.

The application of the maximum-benefit is contingent upon the implementation of specific projects and programs by the Watermaster and the IEUA. These projects and programs, termed the "Chino Basin maximum-benefit commitments," include "The achievement and maintenance of the "hydraulic control" of groundwater outflow from the Chino Basin, specifically from Chino-North, to protect Santa Ana River water quality and downstream beneficial uses."

Rising groundwater from the Chino Basin to the Santa Ana River consists of groundwater from Chino-North that flows past the Chino Creek Well Field (CCWF) well field and unpumped groundwater south of and outside the influence of the Chino Desalter well fields. Groundwater discharge from Chino-North to the Prado Basin Management Zone (PBMZ) is either pumped by wells, consumed by riparian vegetation in the PBMZ, or becomes rising groundwater and contributes to the Santa Ana River discharge at Prado Dam. Recent sampling since 2015 at monitoring wells in the PBMZ near the Santa Ana River shows TDS fluctuating from about 500 milligrams per liter (mgl) to 1,800 mgl, averaging less than 800 mgl.

The Santa Ana River Watermaster (SARWM) has compiled annual reports pursuant to the Judgment that contain estimates of significant discharges to the Santa Ana River, estimates of the storm flow discharge and base flow discharge of the river each water year, as well as the volume-weighted TDS concentration of discharge at the Riverside Narrows and at Prado Dam (see SARWM, 2020). **Exhibit 4.11-2** is a time-history chart of the annual discharge components in the Santa Ana River at Prado Dam and the associated annual volume-weighted TDS concentration as reported by the SARWM.

[3] Prado Basin refers to the Basin that lies before the Prado Dam; the Prado Dam refers to the Dam itself as a point of location at which Santa Ana River flows are measured or quantified.

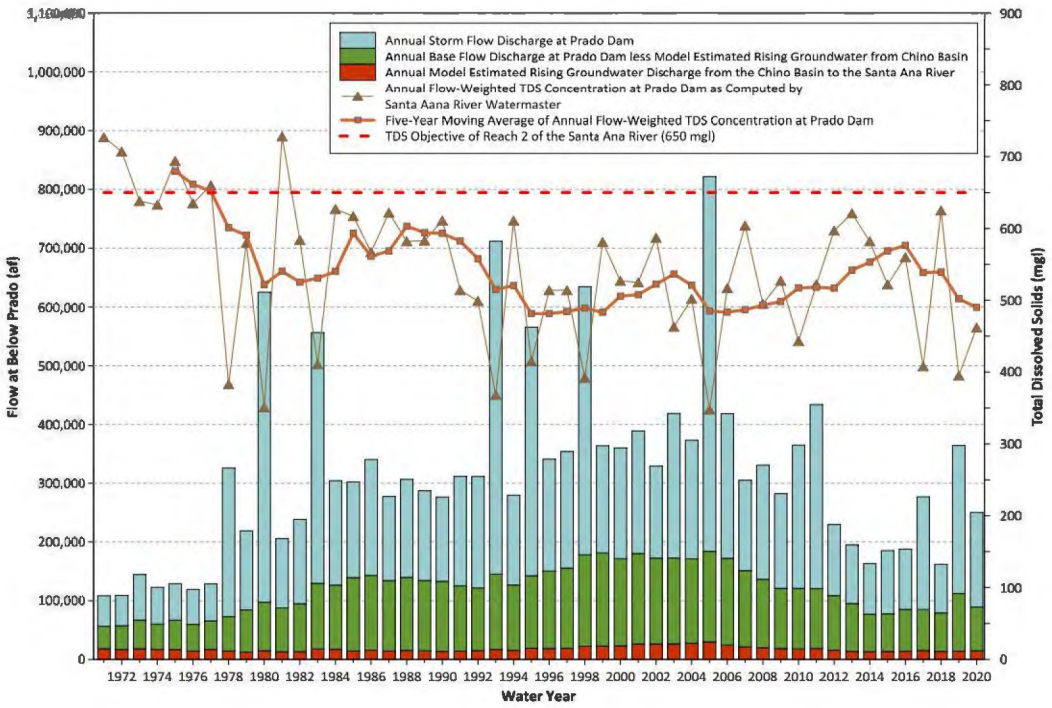


EXHIBIT 4.11-2: PRADO BASIN DISCHARGE DATA

The base flow discharge is represented by two bars: (i) the total rising groundwater discharge from the Chino Basin to the Santa Ana River estimated with the Watermaster's 2020 groundwater model update, and (ii) the SARWM estimate of base flow discharge at Prado Dam minus the rising groundwater from the Chino Basin component — the sum of these two terms equals the SARWM estimate of base flow discharge at Prado Dam. This figure also shows the five-year moving average of the annual flow-weighted TDS concentration of the Santa Ana River at Prado Dam (Reach 2 TDS metric), which is the metric the Regional Board uses to determine compliance with the Basin Plan TDS concentration objective of 650 mgl for Reach 2 of the Santa Ana River.[4] (Regional Board, 2008). Note that:

- Since about 1980, the annual estimates of the rising groundwater discharge from the Chino Basin to the Santa Ana River, which ranged from about 13,000 to 30,000 AFY. This ranges from about three percent of the total annual flow at Prado Dam during wet years to about 17 percent during dry years.
- Since about 1980, the Reach 2 TDS metric has ranged between 481 and 603 mgl and has not exceeded the TDS objective of Reach 2 of 650 mgl—even during extended dry periods when storm water dilution of the Santa Ana River is relatively small (e.g., water years 1984 through 1992, 1999 through 2004, and 2012 through 2016).
- The Reach 2 TDS metric increased continuously from water year 2006 to water year 2016, which coincides with a dry climatic period with a decrease in low-TDS stormwater flow and a steady decrease in the volume of base flow discharge. The decrease in baseflow is mostly attributable to the decrease in wastewater discharges to the Santa Ana River.
- In water year 2020, the Reach 2 TDS metric was 490 mgl.

[4] Reach 2 of the Santa Ana River spans from Prado Dam to 17th Street in Santa Ana.

These observations suggest that the rising groundwater discharge from the Chino Basin to the Santa Ana River has had minimal impact on the flow and TDS concentration of the Santa Ana River since 1978 and has never contributed to an exceedance of the TDS objective for Reach 2.

From 2005 to 2015, the model-estimated groundwater discharge from Chino-North to the PBMZ, ranged from about 550 AFY to 740 AFY without CCWF operation, representing a small fraction of the total rising groundwater from Chino Basin to the Santa Ana River. It represents, on average, about four percent of the rising groundwater discharge from the Chino Basin to the Santa Ana River, and less than one percent of the total flow in the Santa Ana River at Prado Dam. In 2016, the CCWF commenced operation, further reducing the groundwater discharge from the Chino-North to the PBMZ to the de minimis threshold levels (less than 1,000 AFY). The model-projected groundwater discharge past the CCWF ranges from about 400 to 630 AFY in 2016 through 2020. This represents about three percent of the total rising groundwater discharge to the Santa Ana River from the Chino Basin, and less than one percent of the total flow in the Santa Ana River at Prado Dam.

The groundwater discharge from the Chino-North to the PBMZ that becomes rising groundwater discharge in the Santa Ana River has historically been small compared to total discharge in the Santa Ana River and has further decreased with the operation of the CCWF. Based on the behavioral and climatic trends observed since 2005, the Reach 2 TDS metric will likely continue to increase as other conditions that affect the flow and quality of the Santa Ana River change over time, such as the continued reduction of wastewater effluent discharges to the River, and/or an increase in the duration and frequency of dry periods due to climate change. Given that wastewater effluent discharges are projected to further decline, the maintenance of hydraulic control of Chino-North will become increasingly important to protecting the water quality of the Santa Ana River at Prado Dam and downstream beneficial uses.

4.11.2.4 Flood Hazards

Because of high evaporation and percolation rates associated with the surrounding soils and the climate, runoff from normal rainfall generally soaks into the ground quickly if it falls on permeable surfaces. However, during abnormally intense rainfall, localized flooding may occur with stormwater collecting in slight topographic lows or along streets due to the limited capacity of storm drains and collection systems and before being conveyed into regional stormwater facilities. Urban development within the Chino Basin resulted in greater stormwater runoff that is verified through the measured increase in volume of storm flow downstream of Prado Dam.

Under the Federal Emergency Management Agency (FEMA) National Flood Insurance Program has created Flood Insurance Rate Map (FIRM) panels that delineate flood hazard areas. The FEMA FIRM panels for the Chino Basin are provided in the technical appendices as figures. The FEMA FIRM panels, for the Chino Basin include the following:

These panels, where printed and available, are provided in Volume 2 of the DPEIR, Technical Appendices, Appendix 10c. The index maps provide the panel number for specific areas within each county, which if located within the Chino Basin are provided on the disc listed by panel number. By referencing these maps, it can be determined if proposed future projects associated with the CBP will be located within flood hazard areas. Flood hazard areas are also shown in city and county General Plans (Safety Element) but these are not as accurate as the FEMA FIRM panels.

06037C1475F	06065C0683G	06071C8605H	06071C8635J	06071C8657H
06037C1725F	06065C0686G	06071C8606H	06071C8636J	06071C8658H
06037C1750F	06065C0687G	06071C8607H	06071C8637J	06071C8659H
06065C0018G	06065C0702G	06071C8608H	06071C8638H	06071C8665H
06065C0019G	06065C0705G	06071C8609J	06071C8639J	06071C8666H
06065C0038G	06071C7870J	06071C8615H	06071C8641J	06071C8667H
06065C0039G	06071C7883H	06071C8616H	06071C8642J	06071C8676J
06065C0667F	06071C7890J	06071C8617J	06071C8644H	06071C9330H
06065C0677G	06071C7895H	06071C8628J	06071C8651H	06071C9335H
06065C0678G	06071C7895J	06071C8629H	06071C8652H	06071C9345H
06065C0679G	06071C7915H	06071C8630J	06071C8653J	06071C9375H
06065C0681G	06071C7920H	06071C8633J	06071C8654H	06071C9616H
06065C0682G	06071C8600H	06071C8634J	06071C8656H	

4.11.2.5 Groundwater

The Chino Basin encompasses about a 235-square-mile area located in the upper Santa Ana River watershed. The Chino Basin is an alluvial valley that is relatively flat from east to west and slopes from the north to the south at a one to two percent grade. Elevations across the alluvial valley area range from about 2,000 feet in the foothills of the San Gabriel Mountains to about 500 feet near Prado Dam. The Chino Basin is bounded by: the San Gabriel Mountains and the Cucamonga Basin to the north; the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills to the east; the La Sierra area and the Temescal Basin to the south; and by the Chino and Puente Hills and the Pomona and Claremont Basins to the west.

The Chino Basin is one of the largest groundwater basins in Southern California. The 2000 Chino Basin Watermaster Optimum Basin Management Program (OBMP) EIR provides an estimate of groundwater in storage to be about 5,000,000 acre-ft of water and an unused storage capacity of about 1,000,000 acre-ft. More recent work by West Yost (formerly WEI) indicates the actual groundwater stored in the Chino Basin may be 12,000,000 acre-ft or greater (WEI, 2020). Cities and other water supply entities within the Basin produce groundwater for all or part of their municipal and industrial supplies; and about 300 to 400 agricultural users continue to produce groundwater from the Basin. The Chino Basin is an integral part of the regional and statewide water supply system. Prior to 1978, the Basin was in overdraft. After 1978, the Basin has been operated as prescribed in the Judgment and the OBMP.

While considered one Basin from geologic and legal perspectives, the Chino Basin can be hydrologically subdivided into at least five flow systems that act as separate and distinct hydrologic units (**Figure 4.11-2**). Each flow system can be considered a management zone, and the management zones delineated in the OBMP were determined based on these hydrologic units (WEI, 1999). Each management zone has unique hydrology, and water resource management activities that occur in one management zone has limited impacts on the other management zones.

The predominant sources of recharge to the Chino Basin are percolation of direct precipitation and returns from applied water. The following is a list of other potential sources of recharge:

- Infiltration of flow within unlined stream channels overlying the Basin
- Underflow from fractures within the bounding mountains and hills

- Artificial recharge of urban runoff, storm water, imported water, and recycled water at recharge Basins
- Underflow from seepage across the bounding faults, including the Red Hill Fault (from Cucamonga Basin), the San Jose Fault (from the Claremont Heights and Pomona Basins), and the Rialto-Colton Fault (from the Rialto-Colton Basin)
- Intermittent underflow from the Temescal and Spadra Basins

In general, groundwater flow mimics surface drainage patterns: groundwater flows from the forebay areas of high elevation (areas in the north and east flanking the San Gabriel and Jurupa Mountains) towards areas of discharge near the Santa Ana River within the Prado Flood Control Basin.

In detail, groundwater discharge throughout the Chino Basin primarily occurs via:

- Groundwater production
- Rising water within Prado Basin (and potentially other locations along the Santa Ana River, depending on climate and season)
- Evapotranspiration within Prado Basin (and potentially other locations along the Santa Ana River, depending on climate and season) where groundwater is near or at the ground surface
- Intermittent underflow to the Temescal Basin

Groundwater Monitoring

The OBMP established a comprehensive monitoring program for groundwater levels in the Chino Basin. This monitoring program has been refined over time to increase efficiency and to satisfy the evolving needs of the Watermaster and the IEUA, such as new regulatory requirements. **Figure 4.11-3** characterizes the current groundwater-level monitoring program in the Chino Basin.

The Watermaster also initiated a groundwater quality monitoring program in the Chino Basin through the OBMP. Watermaster routinely and proactively collects groundwater quality data from well owners that perform sampling at their own wells, such as municipal producers and government agencies. Groundwater-quality data are also obtained from special studies and monitoring that takes place under the orders of multiple outside agencies. These data are collected from well owners and monitoring entities twice per year. **Figure 4.11-4** shows the wells that have groundwater quality data in the period of July 2015 through June 2020.

Groundwater Pumping

Since its establishment in 1978, the Watermaster has collected information to estimate total groundwater production from the Chino Basin. The Watermaster Rules and Regulations require groundwater producers that produce in excess of 10 AFY to install and maintain meters on their well(s). Well owners that pump less than 10 AFY are considered “minimal producers” and are not required to meter or report to the Watermaster. When the 2000 OBMP was adopted, many of the Agricultural Pool wells did not have properly functioning meters installed, so the Watermaster initiated a meter installation program for these wells. Meters were installed at most agricultural wells by 2003. Watermaster staff visit and record production data from the meters at these wells on a quarterly basis. For the remaining unmetered Agricultural Pool wells, including minimal producer wells, the Watermaster applies a “water duty” method to estimate their production on an annual basis. Members of the Appropriative Pool and Overlying Non-Agricultural Pool, and the Chino Desalter Authority (CDA) record their own meter data and submit them to Watermaster staff on a quarterly basis. All Chino Basin production data are checked for accuracy and stored in the Watermaster’s relational database. The Watermaster summarizes and reports the

groundwater production data based on FY (July 1 to June 30). The Watermaster uses reported production to quantify and levy assessments pursuant to the Judgment. **Figure 4.11-5** shows the locations of all active production wells, symbolized by Pool, in the Chino Basin during FY 2019/2020.

Exhibit 4.11-3 below, shows bar charts depicting the annual groundwater production by Pool for FY 1977/1978 through 2019/2020 as recorded in the Watermaster Database. Total annual groundwater production has ranged from a maximum of about 189,000 af during FY 2008/2009 to a minimum of about 123,000 af during FY 1982/1983 and has averaged about 153,000 AFY. Since FY 1977/1978, Agricultural Pool production has decreased about 72,000 af—declining in proportion to the decline in total production—from 55 percent of total production in FY 1977/1978 to 11 percent in FY 2019/2020. During the same period, Appropriative Pool production increased by about 56,000 af—from 39 percent of total production in FY 1977/1978 to 88 percent as of FY 2019/2020—inclusive of production at the CDA wells. Production in the Overlying Non-Agricultural Pool declined from about six percent of total production in FY 1977/1978 to two percent as of FY 2019/2020.

The spatial distribution of production has also shifted since 1978. **Figure 4.11-6** is a series of maps that illustrate the location and magnitude of groundwater production at wells in the Chino Basin for FYs 1977/1978 (Establishment of Watermaster), 1999/2000 (commencement of the OBMP), and 2019/2020 (current conditions).

The decline in agricultural production in the southern half of the Chino Basin has gradually been replaced by production at the CDA wells since FY 2000/2001. The CDA wells and treatment facilities were developed as part of the OBMP. The desalters are meant to enhance water supply reliability and improve groundwater quality in the Chino Basin. **Figure 4.11-7** displays the locations of current and future desalter wells and treatment facilities.

Artificial Recharge

The IEUA, Watermaster, the Chino Basin Water Conservation District, and the San Bernardino County Flood Control District are partners in the planning and implementation of projects to enhance groundwater recharge in the Chino Basin. **Figure 4.11-8** shows the existing and planned recharge facilities, which include recharge basins and Aquifer Storage and Recovery (ASR) wells. Recycled water recharge is a consistent source of artificial recharge in the Chino Basin, averaging 12,900 AFY over the period of FY 2016 through FY 2020. Imported water recharge fluctuates based on availability, need, recharge capacity, and other factors. Annual imported water recharge has varied from 0 to 35,000 AF.

Groundwater Levels

Figure 4.11-9 displays contours of equal groundwater elevation across the Chino Basin during the spring of 2020. The contours indicate that the regional groundwater flow is in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There is a discernible depression in groundwater levels around the eastern portion of the Chino Basin Desalter well field, which demonstrates the achievement of Hydraulic Control in this area. This depression merged with the pumping depression around the JCSD well field to the east and increased the hydraulic gradient from the Santa Ana River toward the desalter well field. Additionally, there continues to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).

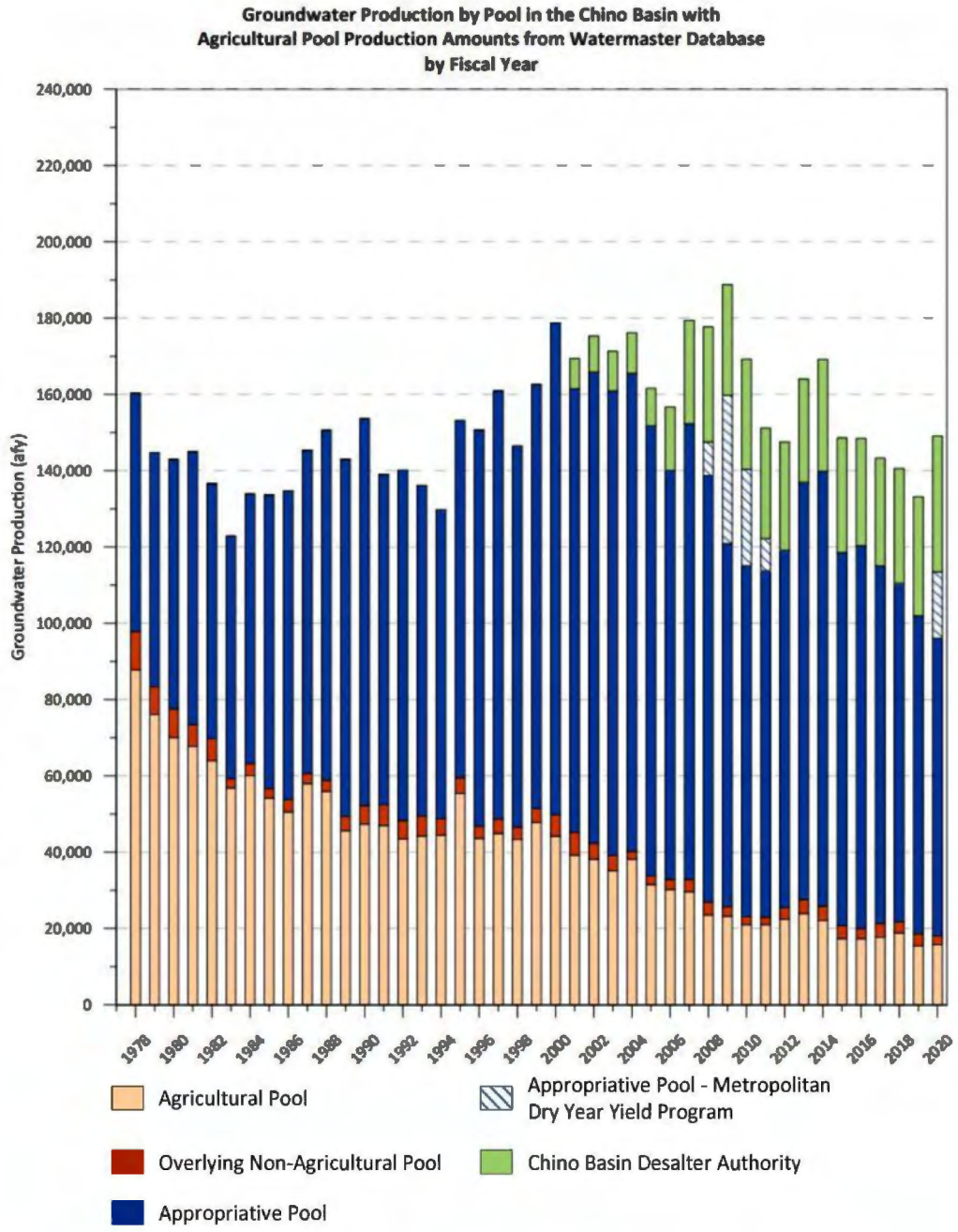


EXHIBIT 4.11-3: GROUNDWATER PRODUCTION BY POOL IN THE CHINO BASIN WITH AGRICULTURAL POOL PRODUCTION AMOUNTS FROM WATERMASTER DATABASE BY FISCAL YEAR

Changes in Groundwater Storage

Figure 4.11-10 shows the change in groundwater elevation during the 20-year period of spring 2000 to spring 2020. This map was created by subtracting a rasterized grid created from the groundwater elevations for spring 2000 from a rasterized grid created from the groundwater elevations for spring 2020. Groundwater levels have increased in the western portion of the Basin. Groundwater levels have decreased in the central and eastern portions of the Basin, and around the eastern portion of the Chino Desalter well field in the south. The changes in groundwater

elevation shown here are consistent with projections from the Watermaster's groundwater modeling efforts (WEI, 2003; 2007; 2014; 2015; 2020) that simulated the changes in the groundwater levels and flow patterns from the production and recharge strategies described in the Judgment, OBMP, Peace Agreement, and Peace II Agreement. These strategies include: desalter production in the southern portion of the Basin; controlled overdraft through Basin Re-Operation to achieve Hydraulic Control; subsidence management in MZ1; mandatory recharge of Supplemental Water in MZ1 to improve the balance of recharge and discharge; and facilities improvements to enhance the recharge of storm, recycled, and imported waters. The changes of groundwater levels are illustrative of changes in storage.

State of Hydraulic Control

Figure 4.11-11 illustrates how groundwater elevations and flow directions have changed in the southern Chino Basin after 20 years of pumping at the Chino-I Desalter well field and 14 years of pumping at the Chino-II Desalter well field. Pumping at the CCWF began in 2014. The groundwater elevation contours depict a regional depression in groundwater levels surrounding the Chino-II Desalter well field and the eastern half of the Chino-I Desalter well field (east of I-20). This regional depression suggests that groundwater flowing south in the Chino-North MZ is being captured and pumped by the desalter wells. Furthermore, the contours southeast of the desalter well field (east of Archibald Avenue) indicate that the Santa Ana River is recharging the Chino Basin and flowing northwest towards the desalter wells. These observations indicate that Hydraulic Control is achieved east of well I-20. West of I-20, the contours suggest that some groundwater flows past the desalter wells. Groundwater modeling has shown that pumping at the CCWF well field decreases the volume of groundwater flow past the desalter wells to less than 1,000 AFY, which the Regional Board defines as de minimis discharge. In 2017, pumping at the CCWF well field declined as well I-17 temporarily ceased operation due to a decrease in the maximum contaminant level for 1,2,3-TCP.

Groundwater Quality

The management of TDS and nitrate concentrations is essential to Watermaster's maximum benefit salt and nutrient management plan. In 2002, Watermaster proposed that the Regional Board adopt alternative maximum benefit water quality objectives for the Chino-North Maximum Benefit Groundwater Management Zone (GMZ) that were higher than the antidegradation water quality objectives for MZ1, MZ2, and MZ3. The proposed objectives were approved by the Regional Board and incorporated into the Basin Plan in 2004 (RWQCB, 2004). The maximum benefit objectives enabled Watermaster and the IEUA to implement recycled water recharge and reuse throughout the Chino Basin. The application of the maximum benefit objectives is contingent upon the implementation of specific projects and programs known as the "Chino Basin maximum benefit commitments." The commitments include requirements for Basin-wide monitoring of groundwater quality, and the triennial recomputation of ambient TDS and nitrate. They also require the development of plans and schedules for water quality improvement programs when current ambient TDS exceeds the maximum benefit objective or when recycled water used for recharge and irrigation exceeds the discharge limitations listed in the IEUA's recycled water discharge and reuse permits.

The ambient water quality (AWQ) of GMZs in the Santa Ana River watershed are computed on a triennial basis and compared with the groundwater-quality objectives defined in the Basin Plan to determine assimilative capacity for TDS and nitrate and to assess if waste discharge requirements are protective of groundwater quality. AWQ represents the volume-weighted average constituent concentration for a GMZ and is derived from water quality statistics computed at wells based on a 20-year time-history of sample results.

In the Chino Basin, the Chino-North GMZ maximum-benefit objective is used as the measure of compliance to permit recycled water discharge and reuse. The Chino-North maximum-benefit objective is numerically higher than the individual anti-degradation objectives set for MZ1, MZ2, and MZ3. If Watermaster and the IEUA do not implement the specific projects and programs described in the Chino Basin maximum-benefit commitments (Table 5-8 in the Basin Plan), the individual anti-degradation objectives for each management zone will apply, and Watermaster and the IEUA will be required to mitigate TDS and nitrate loading from recycled water discharge and reuse above the anti-degradation objectives.

AWQ determinations have been made for seven 20-year periods: 1954-1973, 1978-1997, 1984-2003, 1987-2006, 1990-2009, 1993-2012 (WEI, 2000; 2005b; 2008a; 2011b; and 2014), 1996-2015 (DBS&A, 2017), and 1999-2018 (WSC, 2020). **Figures 4.11-12** and **4.11-13** show trends in the ambient water quality determinations for TDS and nitrate, respectively.

From 1973 to 2018, the ambient TDS increased from 260 to 350 mgl but remains below the maximum-benefit objective of 420 mgl; 70 mgl of assimilative capacity remains. When the current ambient TDS exceeds the maximum-benefit objective, there will be a mitigation requirement for the recharge and direct use of recycled water. Based on the current rate of increase in the ambient TDS concentration for the Chino North GMZ, assimilative capacity will likely exist until about 2033. In the Chino-East and Chino-South GMZs,[5] the current ambient TDS concentrations are greater than the objectives. However, since the TDS concentration of the recycled water reused by the Chino Basin parties in Chino-East and Chino-South GMZs is less than the antidegradation objectives of 730 and 680 mgl, respectively, there are no regulatory compliance challenges.

From 1973 to 2018, the ambient nitrate in Chino-North increased from 3.7 to 10.3 mgl and is currently above the maximum benefit objective of 5 mgl (**Figure 4.11-13**). To ensure recycled water recharge in the Chino-North GMZ complies with the maximum benefit objective, Watermaster and the IEUA must recharge low-nitrate imported and storm waters such that the 12-month, volume-weighted concentration of all recharge sources (storm water, recycled water, and imported water) is less than or equal to the maximum-benefit objective. In the Chino-East and Chino-South GMZs, the current ambient nitrate concentrations are two to three times greater than the antidegradation objectives of 10 mgl and have been increasing since 1973.

For all GMZs, the increase in ambient constituent concentrations is likely related to an increase in the data available to perform the calculations since the implementation of the OBMP monitoring programs, opposed to the actual degradation of water quality.

Ground-level Monitoring Program

Watermaster has implemented a comprehensive ground-level monitoring program to inform the management of land subsidence due to groundwater pumping in the Chino Basin. This program was developed in the OBMP as a response to measured land subsidence and surface fissuring in MZ-1. The ground-level monitoring program includes measurements of piezometric levels, aquifer-system deformation, vertical ground-motion, and horizontal ground-surface deformation.

4.11.3 Regulatory Setting

There are certain regulations that also are used to evaluate the potential significance of impacts on hydrology and water quality. These issues are summarized in the following text.

[5] The boundaries of the Chino East and Chino South GMZs are identical to the OBMP MZs 4 and 5, respectively.

4.11.3.1 Federal

Federal Clean Water Act

Pursuant to Section 404 of the Clean Water Act, the United States Army Corps of Engineers (ACOE) regulates discharges of dredged and/or fill material into waters of the United States. "Waters of the United States" are defined in ACOE regulations at 33 C.F.R. Part 328.3(a). Navigable waters of the United States are those waters of the United States that are navigable in the traditional sense. Waters of the United States is a broader term than navigable waters of the United States and includes adjacent wetlands and tributaries to navigable waters of the United States and other waters where the degradation or destruction of which could affect interstate or foreign commerce.

The Federal Clean Water Act (CWA) requires all states to conduct water quality assessments of their water resources to identify water bodies that do not meet water quality standards. The water bodies that do not meet water quality standards are placed on a list of impaired waters pursuant to the requirements of Section 303(d) of the CWA.

The Federal Clean Water Act and the State Porter-Cologne Water Quality Act, require Basin-wide planning. Additionally, the National Pollution Discharge Elimination System (NPDES), empowers the regional boards to set discharge standards, and encourages the development of new approaches to water quality management. As part of the NPDES program, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared for construction activities affecting greater than one acre because the discharge of stormwater during construction is considered a non-point source of water pollution.

The Chino Basin is located in the Santa Ana Regional Water Quality Control Board (RWQCB) jurisdiction.

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to prohibit the discharge of pollutants to waters of the United States unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) permit. The Clean Water Act focused on tracking point sources, primarily from wastewater treatment facilities and industrial waste dischargers, and required implementation of control measures to minimize pollutant discharges. The Clean Water Act was amended again in 1987, adding Section 402(p), to provide a framework for regulating municipal and industrial storm water discharges. In November 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish requirements for specific categories of industries, including construction projects that encompass certain acreage, currently projects of one acre or larger.

National Pollutant Discharge Elimination System (NPDES) Program

As stated above, the NPDES permit program is administered in the State of California by the SWRCB and RWQCBs under the authority of the USEPA to control water pollution by regulating point sources that discharge pollutants into Waters of the US. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-

stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The Construction General Permit NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit

The Industrial General Permit (IGP) became effective July 1, 2015 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 Code of Federal Regulations Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP).

National Flood Insurance Program (NFIP)
The NFIP is a federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the federal government that states if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas, the federal government will make flood insurance available within the community as a financial protection against flood losses.

In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories by producing Flood Hazard Boundary Maps (FHBMs), Flood Insurance Rate Maps (FIRMs), and Flood Boundary & Floodway Maps (FBFMs). Several areas of flood hazards are commonly identified on these maps. One of these areas is the Special Flood Hazard Area (SFHA) or high-risk area defined as any land that would be inundated by the 100-year flood — the flood having a 1-percent chance of occurring in any given year (also referred to as the base flood).

The high-risk area standard constitutes a reasonable compromise between the need for building restrictions to minimize potential loss of life and property and the economic benefits to be derived from floodplain development. Development may take place within the SFHAs, provided that development complies with local floodplain management ordinances, which must meet the minimum Federal requirements.

4.11.3.2 State

Porter-Cologne Water Quality Act
The Porter-Cologne Water Quality Control Act (California Water Code Division 7, §§ 13000-16104), is California's statutory authority for the protection of water quality. Under this act, the State must adopt water quality policies, plans, and objectives that protect the State's waters. The act sets forth the obligations of the State Water Resources Control Board (SWRCB or State Board) and Regional Water Quality Control Boards (RWQCBs or Regional Boards) pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Act regulates both surface water and groundwater and this authority serves as the basis for Waste Discharge Requirements issued to municipal sewage treatment facilities by the RWQCBs. The Porter-Cologne Water Quality Act is promulgated in Title 22 of the California Code of Regulations. Title 22 includes treatment and reuse requirements for recycled water projects throughout California.

Anti-Degradation Policy
The SWRCB's Anti-Degradation Policy, otherwise known as Resolution No. 68-16, sets specific restrictions for surface and groundwater that have higher than the required quality in order to avoid degradation of those water bodies. Requirements of this policy must be included within all Water Quality Control Plans throughout California (discussed below). Under this policy, actions that would lower the water quality in designated water bodies would only be allowed: if the action would provide a maximum benefit to the people of California, if it will not unreasonably affect beneficial uses, and if it will not lower water quality below applicable standards.

Water Recycling Requirements
The Santa Ana RWQCB Basin Plan requires that a discharge permit be obtained for the use of recycled water. Water Recycling Requirements (WRR) are prepared on a case-by-case basis for

reuse of Title 22 recycled water as well as for discharge of fully advanced treated water intended for groundwater recharge or injection. WRRs are generally issued to the wastewater treatment agency but also cover intended uses. Water recycling criteria are contained in sections 60301 through 60355 of Title 22 and prescribe recycled water quality and wastewater treatment requirements for the various types of allowed uses in accordance with the SWRCB, Division of Drinking Water (DDW) (formerly a part of the California Department of Public Health (CDPH)).

Water Recycling Policy and Salt and Nutrient Management Plans

In February 2009, the State Water Resources Control Board (SWRCB) adopted Resolution No. 2009-0011, which established a statewide Recycled Water Policy. Draft amendments to the Recycled Water Policy were released in May 2012, September 2012, October 2012 (SWRCB hearing change sheets), and January 2013. The Recycled Water Policy Amendment was adopted by the SWRCB on January 22, 2013. The Recycled Water Policy encourages increased use of recycled water and local storm water. It also requires local water and wastewater entities, together with local salt/nutrient contributing stakeholders to develop a Salt and Nutrient Management Plan (SNMP) for each groundwater Basin and subbasin in California.

Sustainable Groundwater Management Act

In 2014, the in 2014, the California State Legislature approved a combination of bills that together formed the Sustainable Groundwater Management Act (SGMA). SGMA requires the formation of local Groundwater Sustainability Agencies (GSAs) that must develop Groundwater Sustainability Plans (GSPs) for medium or high priority groundwater basins in California by 2022. The goal of the GSPs is to make groundwater basins sustainable by the year 2042. In San Bernardino County, the Valley District is forming a joint GSA with other groundwater management agencies in the region to begin preparing a GSP that will manage future groundwater extraction in the program area. The Chino Basin is exempt from most of the SGMA requirements because it is adjudicated.

Recycled Water Groundwater Recharge Projects

On June 18, 2014, new regulations were adopted covering groundwater recharge for potable reuse with recycled water. The new regulations (CWC sections 13500-13529.4) outline permit requirements for recharging groundwater with recycled water for potable reuse in California. The regulations cover surface recharge and subsurface injection and transfer permitting responsibilities from the CDPH to the SWRCB Division of Drinking Water (DDW). The regulations include protocols to provide for source control, water quality control, retention time, emergency response planning, monitoring programs, operational plans, management plans, reporting requirements, and public review requirements.

California Water Code Section 1211

California Water Code section 1211 requires that: (1) the owner of any wastewater treatment plant obtain the approval of the SWRCB before making any change in the point of discharge, place of use, or purpose of use of treated wastewater where changes to the discharge or use of treated wastewater have the potential to decrease the flow in any portion of a watercourse, and (2) the SWRCB review the proposed changes pursuant to the provisions of Water Code section 1700. In order to approve the proposed change, the State Water Board must determine that the proposed change will not operate to the injury of any legal user of the water involved.

4.11.3.3 Regional

Santa Ana Basin Plan

The SWRCB sets statewide policy and together with the RWQCBs implement State and federal laws and regulations. Each of the nine Regional Boards has adopted a Basin Plan. The Santa Ana Region Basin Plan covers parts of southwestern San Bernardino County, western Riverside County, and northwestern Orange County. The Basin Plan specifies water quality objectives for all surface waters within the Santa Ana River watershed. Water quality objectives specified for the creeks and streams include total dissolved solids (TDS), hardness, chloride, sulfate, fluoride, sodium, and total inorganic nitrogen. Groundwater quality objectives for all groundwater basins address total coliform, chemical constituents, radioactivity, and taste and odor (Santa Ana RWQCB, 2016). Chino Basin-specific groundwater quality objectives addressed maximum benefit objectives for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The Basin Plan has developed water quality objectives for both surface water and groundwater resources within the Santa Ana River watershed. Water quality objectives for all resources address nitrate, TDS, metals, total coliform, chemical constituents, radioactivity, and taste and odor (Santa Ana RWQCB, 2016). Chino Basin-specific groundwater quality objectives have been developed for total dissolved solids (420 mg/L) and nitrogen (5 mg/L).

The *Water Quality Control Plan for the Santa Ana River Basin Region 8* (Basin Plan) provides the framework for the RWQCB's regulatory program (Santa Ana RWQCB, 2016). Specifically, it:

1. Sets forth surface and groundwater quality standards for the Santa Ana Region;
2. Identifies beneficial uses of water and discusses objectives that shall be maintained or attained to protect those uses;
3. Provides an overview of types of water quality issues, and discusses them in the context of potential threats to beneficial uses;
4. Denotes recommended or required control measures to address the aforementioned water quality issues;
5. Prohibits certain types of discharge in particular areas of the Region;
6. Summarizes relevant State Board and Regional Board planning and policy documents, and discusses other relevant water quality management plans adopted by federal, state, and regional agencies; and
7. Identifies past and present water quality monitoring programs, and discusses monitoring activities that could be implemented in future Basin Plan updates.

Overall, the Basin Plan functions as the regulatory authority for water quality standards established in local NPDES permits and other RWQCB decisions.

Santa Ana River Judgment

IEUA and Western Municipal Water District (WMWD) have a joint obligation under the 1969 Santa Ana River (SAR) Judgment[6] to provide Base Flow discharge at Prado. The SAR Judgment states the following:

> "CBMWD [Chino Basin Municipal Water District, now IEUA] and WMWD shall be responsible for an average annual Adjusted Base Flow of 42,000-acre feet at Prado. A continuing account […] shall be maintained of actual Base Flow at Prado, with all

[6] Superior Court of the State of California for the County of Orange, 1969. (See footnote 1, above.)

adjustments thereof and any cumulative debit or credit. Each year the obligation to provide Base Flow shall be subject to the following:

1. Minimum Annual Quantities. Without regard to any cumulative credits, or any adjustments for quality for the current Water Year […], CBMWD and WMWD each year shall be responsible for not less than 37,000 -acre feet of Base Flow at Prado, plus one-third of any cumulative debit; provided, however, that for any year commencing on or after October 1, 1986, when there is no cumulative debit, […] said minimum shall be 34,000 acre feet."

The historical accrual of Base Flow credits means that the IEUA's and WMWD's minimum Base Flow obligation at Prado will be 34,000 AFY into the foreseeable future. Notably, the Judgment only prescribes a requirement for the volume of Base Flow and does not prescribe its source.

4.11.3.4 Local

County policies generally pertaining to hydrology and water quality have been included in the section below. Future projects under this EIR will be analyzed at the program-level to assess the applicability of all local jurisdiction's General Plan and municipal code polices to those projects.

Chino Basin Recharge Master Plan
On December 21, 2007, the Court ordered the Chino Basin Watermaster to prepare a Recharge Master Plan Update (RMPU) for Chino Groundwater Basin. In coordination with the Chino Basin Water Conservation District, IEUA, and the Judgment parties, the 2010 RMPU was developed through a stakeholder process. The RMPU outlines recharge estimations, summaries of the projected water supply availability, and the physical means to accomplish those recharge projections. The sections include: safe yield, local stormwater management and mitigation of the loss of safe yield; integrated review of water supply plans; stormwater recharge enhancement opportunities; supplemental water recharge enhancement opportunities; regional stormwater and supplemental water recharge facilities; and supplemental water for replenishment (WEI, 2013). The Recharge Master Plan must be updated no less frequent than every five years; the current version is the 2018 RMPU (WEI, 2018).

City and County General Plan and Municipal Codes
The Chino Basin includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, and Upland. The Chino Basin overlays San Bernardino and Riverside County, and as such includes limited areas of unincorporated Riverside and San Bernardino Counties. Each of these cities and counties has its own General Plan and municipal code that pertain to protection of hydrological resources.

4.11.4 Thresholds of Significance

The criteria used to determine the significance of impacts related to Hydrology and Water Quality may be considered potentially significant if the project would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
   (i) Result in substantial erosion or siltation onsite or offsite?
   (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?
   (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?; or,
   (iv) impede or redirect flood flows?
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

These impact issues are evaluated in below under the Impacts Discussion.

4.11.5 Impacts Discussion

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

This section includes a discussion of the potential impacts to water quality standards and waste discharge requirements as they relate to surface water. The information presented herein is abstracted from the Addendum to the West Yost TM (Appendix 4, Volume 2 of this DPEIR). The potential impacts to groundwater quality standards are summarized in question (b) herein.

Projected Impacts to Surface Water

As detailed in Chapter 3, some of the source water for the CBP is anticipated to be recycled water that is currently discharged to the Santa Ana River or its tributaries. **Table 4.11-1** below summarizes the assumptions for the wastewater discharge schedule with the CBP (CBP discharge scenario) and the wastewater discharge schedule without the CBP (baseline discharge scenario) for fiscal years 2030 and 2040. The baseline discharge scenario serves as a point of comparison to evaluate the potential impacts to water quality standards and Santa Ana River base flow compliance under the CBP discharge scenario. The CBP discharge scenario reduces wastewater discharges to the Santa Ana River by about 16,000 AFY compared to the baseline discharge scenario throughout the program period (the 25-year period of 2029 through 2053). An additional 1,000 AFY is necessary to facilitate the CBP and is assumed to come from reduced demand of wastewater for direct use.

Table 4.11-1
RECYCLED WATER DISCHARGE ASSUMPTIONS FOR BASELINE AND CBP DISCHARGE SCEANRIOS[7] (AF)

Agency	Facility/ Discharge Point	Baseline Discharge Scenario		CBP Discharge Scenario		Baseline minus CBP Discharge Scenario	
		2030	2040	2030	2040	2030	2040
IEUA	001 (Prado)	1,569	1,569	1,151	1,151	418	418
IEUA	002 (Cucamonga Creek)	9,079	9,079	3,637	3,637	5,443	5,443
IEUA	RP-5 (Chino Creek)	2,802	2,802	1,519	1,519	1,283	1,283
IEUA	CCWRF (Chino Creek)	3,587	3,587	737	737	2,850	2,850
Subtotal (IEUA)		**17,038**	**17,038**	**7,043**	**7,043**	**9,995**	**9,995**
SBMWD	RIX	20,275	20,625	20,275	20,625	0	0
City of Rialto	Rialto	10,137	13,115	6,637	9,615	3,500	3,500
City of Riverside	RWQCP	26,604	25,221	26,604	25,221	0	0
WRCRWA	WRCRWTP	2,500	2,500	0	0	2,500	2,500
City of Corona	WWTP #1	1,681	1,681	1,681	1,681	0	0
Subtotal (Non-IEUA)		**61,197**	**63,141**	**55,197**	**57,141**	**6,000**	**6,000**
Total		**78,235**	**80,179**	**62,240**	**64,185**	**15,995**	**15,995**

Projected Water Quality Impacts to Surface Water

The Water Quality Control Plan for the Santa Ana River Basin[8] specifies a TDS objective of 700 milligrams per liter (mgl) for the base flow in Reach 3[9] of the Santa Ana River (SAR). Compliance is determined based on the TDS concentration of the SAR at below Prado Dam in August and September. Since the influence of storm flow and non-tributary flow is at a minimum during these months, the flow in the SAR in August and September is assumed to be entirely base flow. To estimate the potential impacts of the CBP discharge scenario on TDS in the Santa Ana River at Prado Dam, a mass-balance approach was conducted using July through September historical data from the 16-year period of fiscal year (FY) 2005 through 2020. This mass-balance study is documented in the addendum to the West Yost TM.

Figure 4.11-14 shows an annual comparison of the monthly average discharges and the volume-weighted TDS concentrations with and without diversions (i.e., with and without the reduction in wastewater discharge to the SAR due to the CBP shown in **Table 4.11-1**). For every year, the volume-weighted TDS concentration is greater with diversions than without diversions. In 2010, 2012, 2017, and 2019, the diversions are projected to result in an exceedance of the SAR Reach 3 TDS objective of 700 mgl (shown in red on **Figure 4.11-14**). As shown on **Figure 4.11-14**, the volume-weighted annual TDS without diversions fluctuates between 560 (2005) and 720 mgl (2018), and the volume-weighted annual TDS with diversions fluctuates between 560 (2005) and 760 mgl (2018). Over the 16 years of data analyzed, the volume-weighted TDS without and with diversions is 623 and 636 mgl, respectively, an increase of 13 mgl. Over the period from

[7] Acronyms are defined as follows: Recycling Plant No. 5 (RP-5); Carbon Canyon Water Recycling Facility (CCWRF); San Bernardino Municipal Water Department (SBMWD); Rapid Infiltration and Extraction Facility (RIX); Riverside Water Quality Control Plant (RWQCP); Western Riverside County Regional Wastewater Authority (WRCWRA); Western Riverside County Recycled Water Treatment Plant (WRCRWTP); Wastewater Treatment Plant (WWTP)
[8] California Regional Water Quality Control Board, Santa Ana Region. (2011). *Water Quality Control Plan, Santa Ana River Basin (8)*. January 24, 1995 (Updated February 2008 and June 2011).
[9] Reach 3 of the SAR runs from Mission Boulevard in Riverside to Prado Dam

2012 through 2019, when wastewater discharges were generally lower than before 2011, the volume-weighted TDS without and with diversions is 660 and 692 mgl, respectively, an increase of 32 mgl.

These results indicate that the diversions of wastewater for the CBP will, in most years, result in higher TDS concentrations in the SAR at below Prado Dam, potentially causing a violation of the Reach 3 TDS objective. In 4 out of the 15 years analyzed the diversions were projected to cause a violation of the Reach 3 TDS objective.

Compliance with Base Flow Obligations in the Santa Ana River

As detailed in Chapter 3, the IEUA and WMWD have an obligation to ensure 34,000 AFY of base flow in the Santa Ana River at Prado Dam. The diverted wastewater that will serve as source water for the CBP would otherwise contribute to the base flow in the Santa Ana River. The potential impacts of these diversions on the base flow in the Santa Ana River at Prado were evaluated with Watermaster's Chino Basin groundwater model, which simulates surface water flows tributary to and at Prado Dam. Watermaster's Chino Basin groundwater model was recently calibrated in 2020 using the historical period of July 1, 1977 through June 30, 2018. The current version of the model is the 2020 Chino Valley Model (CVM). This evaluation is documented in the addendum to the West Yost TM.

The CBP diversion scenarios D1 through D6 have the same groundwater injection and extraction schedule for the CBP scenarios 1 through 6 shown in **Table 4.11-2**, respectively. They also include the assumed wastewater discharges for the CBP discharge scenario shown in **Table 4.11-1**. The baseline scenario that is used as a point of comparison to the CBP diversion scenarios includes the assumed wastewater discharges for the baseline discharge scenario shown in **Table 4.11-1**. This baseline planning scenario is identical to the baseline planning scenario which is discussed in the response to question (b), except the surface water discharges from the Western Riverside County Recycled Water Treatment Plant are assumed to be 2,500 AFY instead of 0 AFY.

Figure 4.11-15 is a time series of the annual SAR discharge at below Prado Dam under the baseline scenario and CBP diversion scenarios D1 and D2. Of the six CBP diversion scenarios, D1 and D2 have the greatest and least SAR discharge at below Prado Dam, respectively. The other four CBP diversion scenarios have discharges ranging between D1 and D2 and are omitted from **Figure 2** for clarity. The average discharge at below Prado Dam during the program period under the baseline scenario is 167,400 AFY, compared to 152,200 AFY in D1 and 151,000 AFY in D2.

The discharges shown in **Figure 4.11-15** represent the total of storm flow and base flow at Prado Dam. MODFLOW NWT (the groundwater and surface water flow code used in the CVM) does not allow for the exact accounting of base flow and storm flow components. Therefore, this study estimates the annual base flow at SAR as 12 times the average annual SAR discharge below Prado Dam over the summer months (July through September). Since the influence of storm flow is at a minimum during these months, the flow in the SAR is assumed to be entirely base flow. The average monthly discharge at below Prado Dam during the program period over the summer months under the baseline scenario is 5,200 acre-feet per month (afm), compared to 3,700 afm in D1 and 3,650 afm in D2. The minimum average summer discharge over all scenarios occurs in FY 2055 in D2, where the average monthly summer discharge is 3,570 afm. Extrapolated over the entire year, the minimum base flow would be 42,800 AFY, 8,800 AFY greater than the 34,000 AFY base flow obligation. Based on the assumptions incorporated into the CBP diversion

scenarios (e.g., expected value hydrology, upstream wastewater discharges), the reductions in SAR discharge at below Prado Dam will not cause a violation of the base flow obligation at Prado.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?

The information presented herein is abstracted from the West Yost TM (Appendix 4, Volume 2 of this DPEIR) documenting the groundwater modeling of the six CBP scenarios (see **Table 10** in Chapter 3).

In this investigation, the groundwater level and groundwater flow response for all planning scenarios was evaluated using the CVM and related pre- and post-processing tools. The potential impact of the CBP scenarios on the movement of solvent plumes in the Basin was evaluated with the USGS-MT3D model, a solute and reactive transport model, that uses the groundwater level and flow information directly from the Model and plume-specific information to project the movement of the groundwater plumes. The particle-tracking model MODPATH (Pollock, 2016) was used to calculate travel time between the injection wells and the extraction wells to determine Title 22 compliance.

Impacts of the six CBP scenarios are evaluated relative to the baseline scenario over the program period (the 25-year period of 2029 through 2053).

Projected Groundwater Injection and Extraction for the CBP Scenarios

Table 4.11-2 below shows the schedule of operational cycles of injection (PUT) and extraction (TAKE) volumes through the planned CBP facilities for the six CBP scenarios.

Table 4.11-2
SUMMARY OF PUT/TAKE CYCLES FOR THE CBP SCENARIOS (1,000 AF)

Calendar Year	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5		Scenario 6	
	Put	Take	Put	Take	Put	Take	Put	Take	Put	Take	Put	Take
2029	15	-	15	50	15	4.0	15	40	12	-	12	40
2030	15	-	15	50	15	4.0	15	40	12	-	12	40
2031	15	-	15	50	15	4.0	15	40	12	-	12	40
2032	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2033	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2034	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2035	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2036	15	50	15	-	15	40	15	4.4	12	40	12	-
2037	15	50	15	-	15	40	15	4.4	12	40	12	-
2038	15	50	15	-	15	40	15	4.4	12	40	12	-
2039	15	-	15	50	15	4.0	15	40	12	-	12	40
2040	15	-	15	50	15	4.0	15	40	12	-	12	40
2041	15	-	15	50	15	4.0	15	40	12	-	12	40
2042	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2043	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2044	15	-	15	-	15	4.0	15	4.4	12	-	12	-

Calendar Year	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5		Scenario 6	
	Put	Take	Put	Take	Put	Take	Put	Take	Put	Take	Put	Take
2045	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2046	15	50	15	-	15	40	15	4.4	12	40	12	-
2047	15	50	15	-	15	40	15	4.4	12	40	12	-
2048	15	50	15	-	15	40	15	4.4	12	40	12	-
2049	15	-	15	50	15	4.0	15	40	12	-	12	40
2050	15	-	15	25	15	4.0	15	20	12	-	12	20
2051	15	-	15	-	15	4.0	15	4.4	12	-	12	-
2052	15	50	15	-	15	40	15	4.4	12	40	12	-
2053	15	25	15	-	15	20	15	4.4	12	20	12	-
Total	**375**	**375**	**375**	**375**	**375**	**367.8**	**375**	**375**	**300**	**300**	**300**	**300**

The impacts of the changes in project groundwater pumping and recharge projections are described under the “Projected groundwater levels” and “Impacts on groundwater quality” sections herein.

Projected Groundwater Levels

Differences in Groundwater Levels between Baseline and CBP Scenarios

Figures 4.11-16 through **4.11-21**show the differences in groundwater levels between CBP Scenarios 1 through 6, respectively, and the baseline scenario, at the end of the program period (December 31, 2054). The impacts of the assumed operations of the CBP scenarios on groundwater levels are evaluated under four categories: pumping sustainability, subsidence, net recharge, and hydraulic control.

Impacts on Pumping Sustainability due to Changes in Groundwater Levels

The term sustainability, as used herein, refers specifically to the ability to pump water from a specific well at a desired production rate, given the groundwater level at that well, its specific well construction, and current equipment details. Pumping sustainability metrics are defined for each well by its owner. Groundwater production at a well is presumed to be sustainable if the model-projected groundwater level at that well is greater than the sustainability metric. If the groundwater level falls below the sustainability metric, the owner will either need to lower the pumping equipment in their well or reduce the well’s pumping rate.

The increase in storage and subsequent removal of stored water will raise groundwater levels during the PUT periods and lower groundwater levels during the TAKE periods. This increase and decrease in groundwater levels may impact the parties in the Basin disproportionately. Pumping sustainability becomes a concern if the assumed CBP operations cause groundwater levels to fall below sustainable pumping levels at the parties’ wells when the stored water is removed.

The extent of the effect of a CBP scenario on the pumping sustainability of a well depends on the timing of the PUT and TAKE cycles. As shown in the hydrographs in Appendix A of the West Yost TM, the minimum groundwater levels occur at the end of a TAKE cycle and generally recover to near the baseline groundwater level three to four years after the TAKE cycle ends. The largest negative differences between the baseline and a CBP scenario occurs at the end of a TAKE cycle. The West Yost TM summarizes the impacts of the CBP scenarios on pumping sustainability on

wells in the Chino Basin. One or more CBP scenarios cause two wells (City of Ontario Well 39 and Jurupa Community Services District Well 16) to experience pumping sustainability challenges that do not experience sustainability challenges under the baseline scenario. One or more CBP scenarios are projected to exacerbate existing pumping sustainability challenges by 10 feet or more at the City of Ontario Wells 38, 37, and 31, and CVWD Well CB-5. These effects are localized and temporary and can be mitigated with a change in operations of the CBP and/or the Appropriator wells.

Impact Conclusion

The impacts to groundwater sustainability may be significant, however mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- When the Final CBP Scenario is selected and developed, IEUA must submit a Storage and Recovery Program application to Watermaster. Loss of pumping sustainability caused by a Storage and Recovery Program is considered MPI under the Peace Agreement. Under the 2020 Storage Management Plan (SMP), and enforced through mitigation provided below, Watermaster will review each Storage and Recovery Program application, estimate the surface and ground water systems' response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the proposed Storage and Recovery Program. Potential mitigatory actions are outlined below. The Storage and Recovery Program applicant (IEUA) will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the Storage and Recovery Program storage agreement.
- Watermaster conducts comprehensive groundwater-level monitoring under the Peace Agreement and Court orders. The information developed from this monitoring will be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation include: (1) modifying the PUT and TAKE cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description outlines facilities proposed by the CBP, and their operations or modifying operations thereof can be used to implement these mitigation actions.

Impacts on Subsidence due to Changes in Groundwater Levels

Watermaster has been conducting subsidence investigations in MZ-1 since September 2000. Detailed information on Watermaster's land subsidence investigations, causes of subsidence, Watermaster's subsidence management plan for the so-called managed area in Chino, and annual monitoring reports and ongoing investigations to develop a land subsidence management plan for the northwest MZ-1 area can be found on Watermaster's website.[10] This body of work includes the review of historical land subsidence across the Basin using Interferometric Synthetic Aperture Radar (InSAR)[11], ground level surveys, the construction and monitoring of vertical and horizontal extensometers, controlled pumping tests, rigorous review of Basin hydrogeology, and numerical modeling.

[10] https://cbwm.syncedtool.com/shares/folder/9abb162877b999/?folder_id=1055
[11] https://www.usgs.gov/centers/ca-water-ls/science/interferometric-synthetic-aperture-radar-insar?qt-science_center_objects=0#qt-science_center_objects

PA-7 is the key subsidence indicator well used in Watermaster's MZ-1 Long Term Management Plan for the managed area in Chino. Under this plan, Basin management activities must maintain a groundwater elevation greater than the guidance level of 400 feet above mean sea level (ft-amsl) at the PA-7 piezometer to ensure that permanent new land subsidence does not occur. The guidance level is defined as the threshold groundwater elevation at the onset of inelastic compaction of the aquifer system as recorded by the Ayala Park extensometer. The guidance level was established by Watermaster and is subject to change based on the periodic review of monitoring data.

To evaluate the risk of MPI due to subsidence over the entirety of MZ-1, historical groundwater levels were used to develop a groundwater level control surface (new land subsidence metric) throughout MZ-1 that defined the likelihood of initiating new subsidence: if groundwater levels are greater than the new land subsidence metric, then new land subsidence should not occur; if groundwater levels fall below the new land subsidence metric, then new land subsidence could occur and cause MPI.

The western part of the Basin is either susceptible to or actively experiencing land subsidence. The areas of current concern include the so-called "managed area" and the northwest MZ1 area. Land subsidence in the "managed area" has been reduced to de minimis levels through the voluntary efforts of the cities of Chino and Chino Hills. Land subsidence in the northwest MZ1 area, including parts of Chino, Montclair, Ontario, and Pomona, is continuing, and Watermaster is currently in the process of developing a land subsidence management plan in this area.

New land subsidence would become a concern if CBP operations cause groundwater levels to fall below the new land subsidence metric in the areas susceptible to land subsidence. And, pursuant to the Peace Agreement, this new land subsidence is MPI and would require mitigation. In this Environmental Analysis, we use the term new land subsidence to refer to land subsidence caused by the lowering of groundwater levels below the current estimate of the new land subsidence metric. The ongoing subsidence in northwest MZ-1 is occurring because the groundwater levels in that area have been and are currently less than the pre-consolidation stress.

To determine the risk of new land subsidence, projected minimum groundwater levels for the CBP scenarios and the baseline scenario were compared at each of the locations in MZ1 that were used to develop the new land subsidence metric in the baseline scenario. The CBP scenarios are not projected to initiate new land subsidence in any location in MZ1 that was not already projected to initiate new land subsidence in the baseline scenario. Scenario 2 results in the greatest negative difference in minimum groundwater levels compared to the baseline scenario (about -2.5 feet). The location of the greatest negative difference is an area where new subsidence was already projected to occur in the baseline scenario. These projected additional declines in groundwater levels (by up to -2.5 feet) have the potential to exacerbate the occurrence of new subsidence in these areas. The minimum groundwater levels in MZ1 in Scenarios 3 and 5 are always greater than or equal to the groundwater levels in MZ1 in the baseline scenario; therefore, there is no increased risk of new land subsidence in these scenarios.

Impact Conclusion

The impacts on new land subsidence may be significant, however mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- The CBP scenarios are not projected to initiate new land subsidence in areas of MZ1 that were not already projected to experience land subsidence in the baseline scenario.

- New land subsidence caused by a Storage and Recovery Program (e.g., the CBP) is considered MPI under the Peace Agreement. Under the 2020 SMP, IEUA must submit a Storage and Recovery Program application to Watermaster before commencing operations. Watermaster will review this application, estimate the surface and ground water systems' response, prepare a report that describes the response and potential MPI, and develop mitigation requirements to mitigate MPI caused by the CBP. IEUA will develop mitigation measures pursuant to these requirements and incorporate them into its Storage and Recovery Program application. Potential mitigatory actions are outlined below. Upon approval by Watermaster, these mitigation measures will be incorporated into IEUA's Storage and Recovery Program storage agreement.

Watermaster conducts comprehensive groundwater-level and ground-level monitoring under the Peace Agreement and Court orders and pursuant to its adaptive Subsidence Management Plan under the guidance and supervision of the Ground Level Monitoring Committee (GLMC). Participation in the GLMC process could be an appropriate monitoring and mitigation measure to ensure that the CBP does not result in MPI related to land subsidence in the Chino Basin. The information developed from this monitoring will be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation actions include: (1) ensuring that the CBP facilities are limited to MZ-2 and MZ-3, (2) modifying the PUT and TAKE cycles to ensure the CBP operations do not contribute to the lowering of groundwater-levels below the new land subsidence metric, (4) providing an alternate supply to MZ-1 producers to maintain groundwater-levels above the new land subsidence metric, to the extent that the CBP operations affect them, (5) a combination of (1) through (4) above, and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description outlines facilities proposed by the CBP, and their operations or modifying operations thereof can be used to implement these mitigation actions.

Impacts on Net Recharge due to Changes in Groundwater Levels

Net recharge is net inflow to the Basin excluding the direct recharge of Supplemental Water. The CBP operations that assume a late TAKE have the effect of temporarily increasing storage before the TAKE cycle is completed. The CBP modeling indicates that storing water in the Basin for subsequent removal has the effect of reducing net recharge to the Basin. Net recharge is a key factor in the calculation of Safe Yield, and therefore a reduction in net recharge will cause a reduction in Safe Yield.

Exhibit 4.11-4 below shows the time series of net recharge for the baseline scenario and the CBP scenarios. The scenarios with late calls (Scenarios 1, 3, and 5) result in a decrease of net recharge of up to 410 AFY compared to the baseline scenario. The scenarios with early calls (Scenarios 2, 4, and 6) result in an increase of net recharge of up to 840 AFY compared to the baseline scenario.

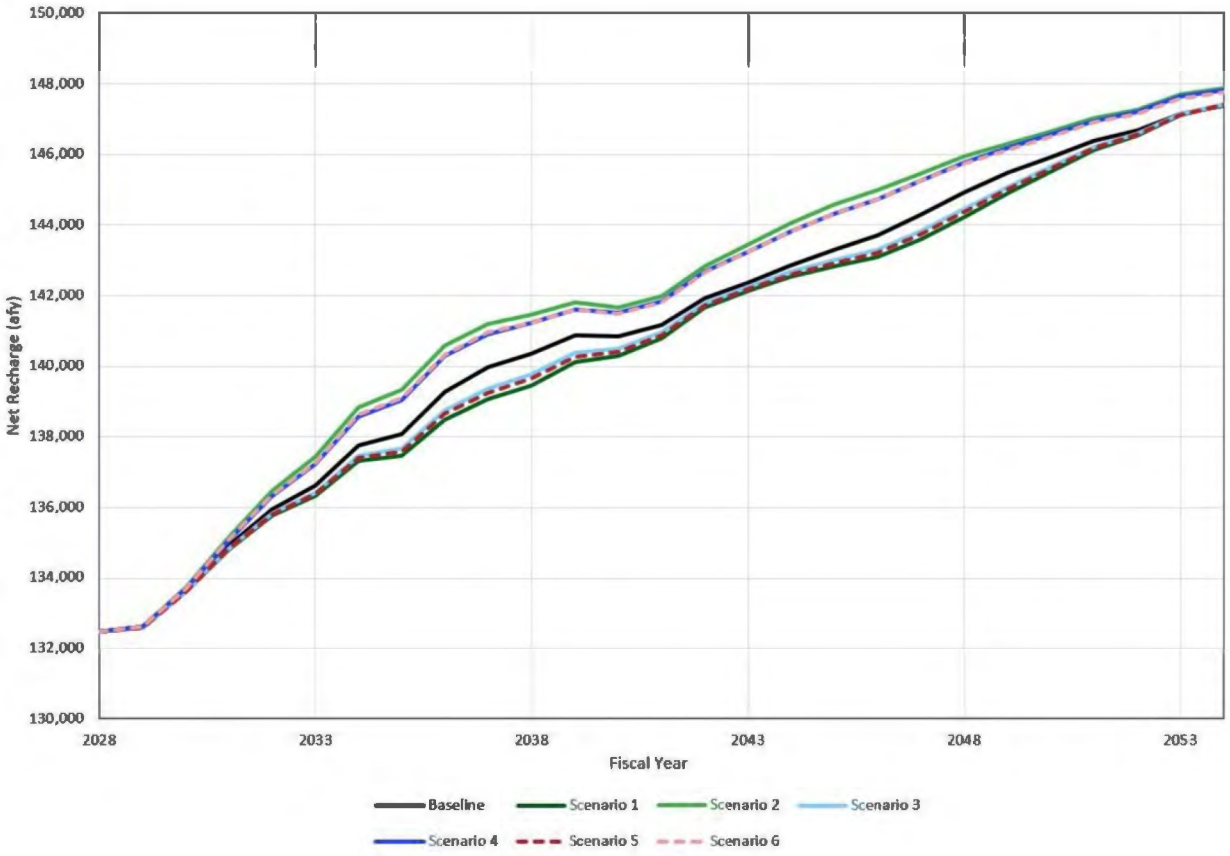


EXHIBIT 4.11-4: PROJECTED NET RECHARGE FOR THE BASELINE AND CBP SCENARIOS

Impact Conclusion

The impacts on net recharge may be potentially significant; however, mitigation is provided below that will minimize impacts below significance thresholds. This is for the following reasons:

- Reduction in net recharge caused by a Storage and Recovery Program (e.g., the CBP) is an adverse impact that must be mitigated. Under the 2020 SMP, Watermaster will estimate the reduction in net recharge and Safe Yield for the CBP and deduct it from water stored in the CBP storage account to compensate for its impact on net recharge and Safe Yield. Watermaster will review these impacts and develop mitigation requirements for the proposed CBP operations. The IEUA will develop mitigation measures pursuant to these requirements and incorporate them into their Storage and Recovery Program application. Potential mitigatory actions are outlined below. Upon approval by Watermaster, these mitigation measures will be incorporated into the IEUA's CBP storage agreement.
- Watermaster conducts comprehensive monitoring (under the Peace Agreement and Court orders) and modeling to estimate net recharge of the Chino Basin. The information developed from these efforts will be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate for these impacts. Potential mitigation actions include: (1) modifying the PUT and TAKE operations to minimize reductions in net recharge; (2) deducting the reduction in net recharge from its Storage and Recovery account (e.g., CBP scenario 3); (3) recharge additional water to mitigate reductions in net recharge; (4) construct facilities in the

southern part of the Basin to eliminate the reduction of net recharge due to the CBP operations; (5) a combination of (1) through (4); and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions. The Project Description outlines facilities proposed by the CBP, and their operations or modifying operations thereof can be used to implement these mitigation actions.

Impacts on Hydraulic Control due to Changes in Groundwater Levels

The application of the maximum-benefit is contingent upon the implementation of specific projects and programs by the Watermaster and the IEUA. These projects and programs, termed the "Chino Basin maximum-benefit commitments," include "The achievement and maintenance of the "hydraulic control" of groundwater outflow from the Chino Basin, specifically from Chino-North, to protect Santa Ana River water quality and downstream beneficial uses." If these maximum-benefit commitments are not met, the antidegradation objectives would apply for regulatory purposes. The application of the antidegradation objectives would result in no assimilative capacity for TDS and nitrate in the Chino-1, Chino-2, and Chino-3 GMZs, and the Regional Board would require mitigation for both recycled water and imported State Water Project (SWP) water discharges to Chino-North that exceed the antidegradation objectives. Furthermore, the Regional Board would require that the Watermaster and the IEUA mitigate the effects of discharges of recycled and imported SWP water that took place in excess of the antidegradation objectives under the maximum-benefit objectives retroactively to January 2004. The mitigation for past discharges would be required to be completed within a ten-year period following the Regional Board's finding that the maximum-benefit commitments were not met.

The attainment of Hydraulic Control is measured by demonstrating, from groundwater elevation data, either that all groundwater north of the Chino Basin desalter (desalter) well fields cannot pass through the desalter well fields (total hydraulic containment standard) or that groundwater discharge through the desalter well fields is, in aggregate, less than 1,000 AFY (de minimis Hydraulic Control standard). The Regional Board has agreed that compliance with the Hydraulic Control standard will be determined from the results of periodic calibrations and applications of the Watermaster's Chino Basin groundwater model and interpretations of the model results.

The achievement of Hydraulic Control required the expansion of the Chino desalter program to 40,000 AFY and the reduction in storage in the Basin by 400,000 af. Hydraulic Control was recently achieved when the subsurface discharge through the Chino Creek well field (CCWF), a part of the Chino desalter facilities, was reduced to less than 1,000 AFY (see **Figure 4.11-7** for the location of the CCWF). Increasing storage in the Basin will have the effect of increasing the subsurface discharge through the CCWF, potentially causing a loss of Hydraulic Control. The loss of Hydraulic Control could have significant economic adverse impacts to the parties if required to mitigate past TDS and nitrate loading to the Chino Basin in excess of the antidegradation objectives resulting from recycled water reuse for all recycled water used back to 2004 and all future recycled water reuse.

Model simulations of the baseline and all CBP planning scenarios indicated complete Hydraulic Control in the CDA well field area running from the Jurupa Hills in the east to Chino Desalter well I-4 in the west for the projection period of 2018 through 2054.

Exhibit 4.11-5 below shows time series of the projected groundwater discharge through the CCWF for the baseline scenario and the CBP scenarios compared to the de minimis Hydraulic Control standard of 1,000 AFY. The groundwater discharge through the CCWF is projected to be less than 1,000 AFY for all CBP scenarios. The discharge through the CCWF in the baseline

scenario and the CBP scenarios declines over time, never exceeds more than 450 AFY, and is always less than the de minimis discharge standard. Discharge through the CCWF is greatest under Scenario 1, where the discharge averages 10 AFY more than the baseline scenario over the program period.

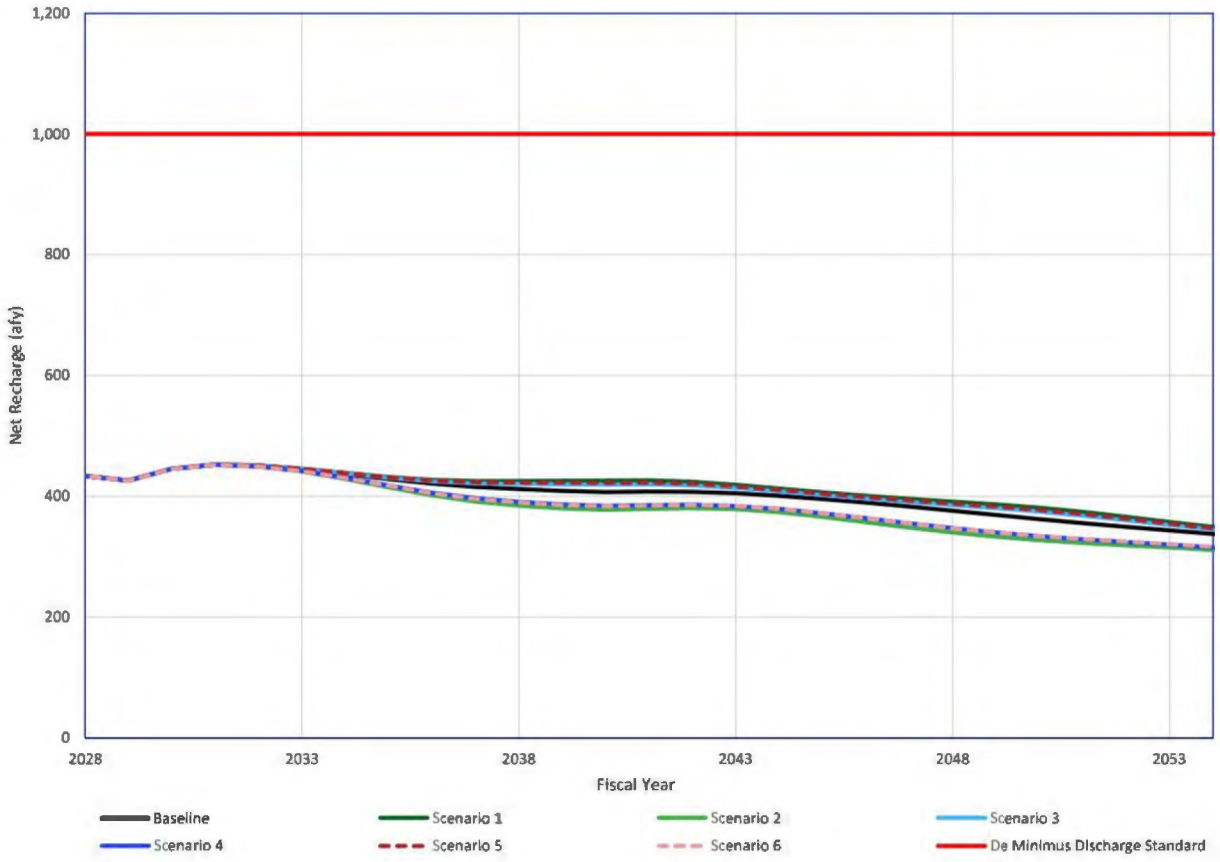


EXHIBIT 4.11-5: PROJECTED DISCHARGE THROUGH THE CCWF FOR THE BASELINE AND CBP SCENARIOS

Impact Conclusion

The impacts on hydraulic control are not projected to be significant. Regardless, given that implementation of the CBP will require a Storage and Recovery Program application and ultimately a Storage and Recovery Program Agreement, the Watermaster will monitor the state of hydraulic control and would be able to enforce mitigation measures on the IEUA's operation of the CBP such that no significant impacts would occur over the life of the Program.

Impacts on Groundwater Quality

The modeling of the CBP scenarios evaluated seven VOC plumes in the Chino Basin: the Pomona area, GE Flat Iron, CIM, Chino Airport, South Archibald, Milliken Landfill, and Stringfellow plumes. The two inorganic plumes include the Kaiser TDS and the Stringfellow perchlorate plumes.

Figures 4.11-22 through **4.11-24** show the projected locations of the plumes at the end of the program period for the baseline scenario compared to Scenarios 1 and 2, 3 and 4, and 5 and 6,

respectively. A review of **Figures 4.11-22** through **4.11-24** show that no CBP scenario is projected to accelerate the southern (downgradient) boundaries of the plumes compared to the baseline scenario. The plume displacements due to the CBP scenarios are minor compared to the magnitude of the projected movement of the plumes in the baseline scenario. None of the CBP scenarios are projected to result in any plume impacting a well operated by an Appropriative Pool party that is not already projected to be impacted under the baseline scenario.

Future projections of the Stringfellow TCE and perchlorate plumes were not made because the Model does not currently include the hydrogeologic resolution to make a reasonable projection of their movements. Future projections of the Kaiser TDS plume were not made because its location is not well known nor is the spatial distribution of the TDS concentration within it.

These simulations are not definitive assessments of the fate of these plumes. The precise movement of these plumes is controlled by the localized heterogeneities that are not represented in the Model. The best use of the solute modeling results described herein is to show how the CBP scenarios could affect the movement of the plumes relative to the baseline scenario. The projected locations of the plumes are shown in outline form for each scenario and indicate the limits of the projected plume with a VOC concentration greater than 5 µg/l.

In addition to the potential impacts of the CBP scenarios on the movement of the VOC plumes in the Chino Basin, the injection of the tertiary recycled water that is treated at the AWPF may also affect the water quality of the Chino Basin. To comply with the California Code of Regulations Title 22 Regulations for Groundwater Replenishment of Recycled Water (Title 22), purified recycled water must have a minimum underground residence time of at least two months as demonstrated with a tracer study after construction. Numerical modeling is granted 50 percent credit of a tracer test and must demonstrate four months of travel time between injection and extraction wells.

The particle-tracking model MODPATH (Pollock, 2016) was used to calculate travel time between the injection wells and extraction wells. In a particle-tracking simulation, tracer particles are inserted into the groundwater model around injection wells at specific times, then MODPATH calculates the flow paths and travel times of the inserted particles based on the simulated flow fields of the groundwater-flow model. To estimate the residence time of the treated recycled water injected at the CBP injection wells, a cluster of 21 particles were inserted at each of the model grid cells corresponding to the planned injection wells. New clusters of particles were inserted at the start of each quarter during the program period to capture the changes in the groundwater flow field over time. The travel time of particles that reach CBP extraction wells or the Parties' extraction wells can be used as a metric to evaluate compliance with Title 22 regulations. As mentioned in the introduction and Brown and Caldwell (2020), numerical modeling methods must demonstrate four months of travel time between injection and extraction wells. Brown and Caldwell (2020) use the conservative estimate of six months of travel time as a threshold for determining compliance with Title 22 regulations.

Figure 4.11-25 shows the locations of particles at six months (light blue) and two years (dark blue) after their release from the injection wells during the program period for CBP Scenario 1. Six months after particles are released, all particles are located within 0.2 miles of their original location. Two years after particles are released, all particles are within one mile of their initial locations. Scenarios 2 through 6 show similar patterns of particle migration. Across all scenarios, the minimum travel time from an injection well to an extraction well (either a CBP well or a well owned by a Party) is 8.3 months, greater than the threshold for compliance with Title 22.

Furthermore, it should be noted that the source water that will be injected in the CBP will be of better quality than the ambient groundwater and will therefore improve the water quality of the Basin.

Impact Conclusion

The impacts on groundwater quality are projected to be less than significant. Regardless, given that implementation of the CBP will require a Storage and Recovery Program application and ultimately a Storage and Recovery Program Agreement, the Watermaster will monitor the state of groundwater quality and groundwater plumes, and would be able to enforce mitigation measures on the IEUA's operation of the CBP such that no significant impacts would occur over the life of the Program.

Summary of Impacts to Groundwater from CBP Operations

The groundwater level impacts are spatially varying, and they are embedded in the impact assessment for new land subsidence and pumping sustainability.

The CBP scenarios analyzed herein are projected to cause changes in storage and net recharge throughout the program period. The early call scenarios are projected to cause an increase in net recharge, and the late call scenarios are projected to cause a decrease in net recharge. As mentioned earlier, one way to mitigate the induced reduction in net recharge due to the late call scenarios is to reduce the takes by the amount of reduced net recharge. Not addressing the induced reduction in net recharge due to the late call scenarios will reduce the Safe Yield allocated to the Appropriative Pool parties, cause overdraft, or both, and will increase the risk of pumping sustainability challenges.

No CBP scenarios are projected to affect the direction or speed of the VOC plumes in the Chino Basin. The modeled travel times of the injected water in the CBP are projected to meet the Title 22 requirements for the recharge of treated wastewater.

The Watermaster will periodically review current and projected Basin conditions, compare this information to the projected Basin conditions assumed in the evaluation of the IEUA's Storage and Recovery Program application for the CBP, and compare the projected CBP operations to actual CBP operations. The Watermaster will then make findings regarding the efficacy of the mitigation program and requirements included herein and by the CBP storage agreements. Based on the Watermaster's review and subsequent findings, where applicable, the Watermaster will then require changes and/or modifications in the CBP storage agreements that would adequately mitigate MPI and related adverse impacts.

Based on this information, the CBP would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge and will not impede sustainable management of the Basin. Impacts would be less than significant following implementation of the mitigation measures below.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HYD-1: Watermaster shall review the IEUA's Storage and Recovery Program application for the CBP and estimate the surface and ground water systems' response (estimate the potential for new pumping sustainability challenges). Watermaster shall then prepare a report that

describes the response and potential Material Physical Injury (MPI) to the Chino Basin and shall develop mitigation requirements pursuant to MM HYD-2 to mitigate MPI caused by the CBP. The IEUA shall develop mitigation measures pursuant to these requirements established by the Watermaster; these measures shall be incorporated into its Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the CBP storage agreement.

HYD-2: To mitigate MPI caused by the IEUA's proposed Storage and Recovery Program application (as described above under HYD-1), the data gathered through Watermaster's comprehensive groundwater-level monitoring shall be used to identify potential impacts on pumping sustainability and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or TAKE cycles to minimize impacts to pumping sustainability, (2) strategically increasing supplemental water recharge to mitigate loss of pumping sustainability, (3) modifying a party's affected well (lowering pump bowls), (4) providing an alternate supply to the affected party to ensure it can meet its demands, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.

HYD-3: Watermaster shall review the IEUA's Storage and Recovery Program application for the CBP and estimate the surface and ground water systems' response (estimate the potential for new land subsidence). Watermaster shall then prepare a report that describes the response and potential MPI to the Chino Basin and shall develop mitigation requirements to mitigate MPI caused by the proposed CBP. The IEUA shall develop mitigation measures pursuant to these requirements pursuant to MM HYD-4 established by the Watermaster; these measures shall be incorporated into its Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures will be incorporated into the CBP storage agreement.

HYD-4: To mitigate the potential for new land subsidence caused by the IEUA's proposed Storage and Recovery Program application (as described above under HYD-3), the data gathered through Watermaster's comprehensive groundwater-level and ground-level monitoring shall be used to identify the potential for new land subsidence and to develop mitigation requirements to mitigate for these impacts. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or TAKE cycles to ensure the CBP does not contribute to the lowering of groundwater-levels below the new land subsidence metric, (2) providing an alternate supply to MZ-1 producers to maintain groundwater-levels above the new land subsidence metric, to the extent that the CBP affects them, (3) a combination of (1) and (2) above, and (4) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.

HYD-5: Watermaster shall estimate the reduction in net recharge and Safe Yield for the CBP and deduct it from water stored in the CBP storage account, which will compensate for its impact on net recharge and Safe Yield. Watermaster shall review these impacts and develop mitigation requirements for the CBP. The IEUA shall develop mitigation measures pursuant to the requirements suggested in MM HYD-6 and established by Watermaster; these measures shall be incorporated into the IEUA's Storage and Recovery Program application. Upon approval by Watermaster, these mitigation measures shall be incorporated into the CBP storage agreement.

HYD-6: To mitigate reduction in net recharge and Safe Yield caused by the CBP (as described above under HYD-5), the Watermaster's comprehensive monitoring and modeling that estimates net recharge of the Chino Basin shall be used to identify potential and actual losses of net recharge and to develop mitigation requirements to mitigate impacts thereof. Potential mitigation includes, but is not limited to: (1) modifying the PUT operations and/or

TAKE cycles to minimize reductions in net recharge, (2) deducting the reduction in net recharge from the IEUA's Storage and Recovery account, (3) recharge additional water to mitigate reductions in net recharge, (4) construct facilities in the southern part of the Basin to eliminate the reduction of net recharge due the CBP, (5) a combination of (1) through (4), and (6) the implementation of a monitoring program to verify the effectiveness of the mitigation actions.

HYD-7: Watermaster shall periodically review current and projected Basin conditions and shall compare this information to the projected Basin conditions assumed in the evaluation of the CBP Storage and Recovery Program application process, compare the projected CBP operations to actual operations. The Watermaster shall then make findings regarding the efficacy of the mitigation program and requirements required herein and by the CBP storage agreement. Based on Watermaster's review and subsequent findings, where applicable, Watermaster shall require changes and/or modifications in the CBP storage agreement that will adequately mitigate MPI and related adverse impacts including but not limited to pumping sustainability, net recharge and safe yield, subsidence, hydraulic control, and groundwater quality.

Note this document acknowledges that monitoring is not mitigation in and of itself, but it is essential to the Watermaster's mitigation process because it identifies the potential for a potential significant impact (MPI). Data indicating that a significant impact may be evolving will allow the Watermaster to initiate any of the mitigation measures outlined above that can reduce or eliminate the potential impact identified through monitoring. The text below identifies how this can be accomplished.

Level of Significance After Mitigation: Less Than Significant

The mitigation measures provided above require the Watermaster to utilize its monitoring network based on the most current version of the Chino Valley Basin model—whether it is the 2020 CVM, or some future update—to evaluate the IEUA's storage and recovery program for the CBP to determine whether it will cause MPI, and to require mitigation, if feasible.

Pumping Sustainability

Mitigation measures (MM) **HYD-1** and **HYD-2** address impacts of the CBP related to pumping sustainability in the Chino Basin; these measures would ensure that Watermaster gathers the appropriate data to (1) determine whether the CBP operations would result in loss of pumping sustainability, and (2) respond with appropriate mitigation to minimize the potential loss of pumping sustainability that may occur from CBP operations. These measures would enable the IEUA and Watermaster to prevent adverse impacts related to pumping sustainability that may result from implementation the CBP.

Subsidence

MMs **HYD-3** and **HYD-4** address potential new subsidence within the Chino Basin; these measures would ensure that the Watermaster gathers the appropriate data to respond (1) determine whether the CBP operations would result in new subsidence, and (2) respond with appropriate mitigation to minimize the potential for new subsidence that may occur from the CBP operations. These measures would enable the IEUA and Watermaster to prevent adverse impacts related to new subsidence that may result from implementation of the CBP.

Net Recharge and Safe Yield

MMs **HYD-5** and **HYD-6** address potential reduction in net recharge and impacts to Safe Yield within the Chino Basin due to the CBP; these measures would ensure that the Watermaster gathers the appropriate data to (1) determine whether the CBP operations would result in potential

reduction in net recharge and impacts to Safe Yield, and (2) respond with appropriate mitigation to minimize the potential for a reduction in net recharge and for impacts to Safe Yield that may occur from the CBP operations. These measures would enable the IEUA and Watermaster to prevent adverse impacts related to potential reduction in net recharge and impacts to Safe Yield that may result from implementation of the CBP.

Hydraulic Control

The projected impacts of the CBP on Hydraulic Control are projected to be less than significant. However, MM **HYD-7** addresses the plan of response by Watermaster and the IEUA should the Basin conditions come to vary from the projections that have been modeled as part of the CBP planning. This measure would enable the Watermaster to modify previously agreed upon mitigation measures to address actual Basin conditions and apply these measures to the CBP allowing for flexibility in how the Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels. Furthermore, as part of the Watermaster's review of the IEUA's Storage and Recovery Program application for the CBP, the effects of the CBP operations on the state of Hydraulic Control will be re-assessed. If Watermaster determines that the CBP operations may result in significant impacts to Hydraulic Control, the Watermaster will require that the IEUA implement mitigation (enforced through MM **HYD-7**) to reduce their impacts to less than significant levels.

Water Quality

The impacts of the CBP on water quality are projected to be less than significant. However, MM **HYD-7** addresses the plan of response by the Watermaster and the IEUA should the Basin conditions come to vary from the projections that have been modeled as part of the CBP planning. This measure would enable the Watermaster to modify previously agreed upon mitigation measures to address actual Basin conditions and apply these measures to the CBP allowing for flexibility in how the Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels. Furthermore, as part of the Watermaster's review of the IEUA's Storage and Recovery Program application for the CBP, the effects of the CBP operations on the movement of major contaminant plumes in the Chino Basin will be re-assessed. If the Watermaster determines that the CBP operations may result in significant impacts to the movement of the plumes, the Watermaster will require the IEUA to implement mitigation (enforced through MM **HYD-7**) to reduce their impacts to less than significant levels.

General Impacts to Groundwater from CBP Implementation

As previously stated, MM **HYD-7** addresses the plan of response by the Watermaster and the IEUA should the Basin conditions come to vary from the projections that have been modeled as part of the CBP planning. This measure would enable the Watermaster to modify previously agreed upon mitigation measures to address actual Basin conditions and apply these measures to the CBP. This allows for flexibility in how the Watermaster approaches minimizing the groundwater issues outlined herein to below significance levels.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Cumulative development within the Basin could result in a decrease in groundwater supplies or interference with groundwater recharge, thereby impeding sustainable groundwater management of the Basin. The CBP would be subject to the Watermaster's authority over management of the Chino Basin. Pursuant to the 2020 SMP, the IEUA must submit a Storage and Recovery Program

application for the CBP prior to commencing operations. The Watermaster must then evaluate the potential impacts of the CBP operations on the impact criteria described in this section. If the Watermaster determines that any of the impacts are significant, the Watermaster will require that IEUA implement or facilitate one or more mitigation measures (potentially including MMS **HYD-1** through **HYD-7**) when operating the CBP to ensure that there are no adverse impacts or MPI resulting from the CBP. As such, with implementation of the above mitigation, the Watermaster and the IEUA would be able to minimize impacts of the CBP on the Basin, thereby reducing any potential for the CBP to contribute cumulatively considerable impacts on the Basin. Therefore, implementation of the CBP and any associated mitigation measures will not impede sustainable groundwater management of the Basin, and cumulative impacts would therefore be less than significant.

Level of Significance After Mitigation: Less Than Significant

c(i). Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed wells could alter the existing drainage patterns at each project site. It is not known whether the wells will be installed within developed sites or within sites that are vacant and undeveloped. However, given the small area (less than one half acre) within which the proposed wells will be installed, it is not anticipated that substantial changes in drainage would occur. The construction of proposed facilities would require activities such as pavement breaking, ditching, drilling, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns. Compliance with the construction general permit (CGP), Stormwater Pollution Prevention Plan (SWPPP), or San Bernardino and Riverside Counties MS4 Permits where applicable would be required. However, given the small size area in which the wells would be developed, mitigation to enforce best management practices (BMPs) is provided below to minimize impacts at sites that are less than an acre and are therefore not subject to the CGP or SWPPP. Each of these permits and plans would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets.

With implementation of such BMPs and compliance with conditions of required permits governing storm water runoff from construction sites, potential onsite and offsite erosion would be reduced and discharges from construction sites would not exceed the capacity of existing storm water drainage systems. Impacts would be less than significant.

During operation of the proposed wells, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Operation of the proposed wells would require mitigation to minimize the potential for these changes resulting in a less than significant impact.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as those identified under Project Category 1; however, it is anticipated that the majority of the facilities proposed as part of Project Category 2 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce impacts to a level of less than significant. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition and no operational impact would occur.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation onsite or offsite. Impacts related to the facilities that would support this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under question (b) above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as those identified under Project Category 1 and 2. It is anticipated that the majority of the facilities proposed as part of Project Category 4 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce impacts to a level of less than significant. Additionally, as with the mitigation proposed to address ground disturbance associated with installation and maintenance of proposed monitoring equipment on existing wells discussed under Project Category 1, the same mitigation measure would also minimize the potential for erosion as a result of ground disturbance associated with installation of proposed groundwater treatment at existing well sites.

Combined Project Categories

The majority of the proposed facilities would not result in the addition of impervious surfaces that would result in substantial erosion or siltation onsite or offsite. The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs enforced through mitigation provided below would minimize all construction impacts to less than significant levels.

The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. As such, mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce potential erosion and siltation impacts to a level of less than significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

HYD-8: ***Prior to the commencement of construction of any CBP project that will disturb less than one acre (i.e., that is not subject to the California Construction Stormwater General Permit), IEUA shall require implementation of and construction contractor(s) shall select best management practices (BMPs) to achieve a reduction in pollutants from stormwater discharge to the maximum extent practicable during the construction of each CBP facility, and to control urban runoff after each CBP facility is constructed and is in operation. Examples of BMP(s) that would achieve a reduction in pollutants include, but are not limited to:***

- ***The use of silt fences or coir rolls;***
- ***The use of temporary stormwater desilting or retention basins;***
- ***The use of water bars to reduce the velocity of stormwater runoff;***
- ***The use of wheel washers on construction equipment leaving the site;***
- ***The washing of silt from public roads at the access point to the site to prevent the tracking of silt and other pollutants from the site onto public roads;***
- ***The storage of excavated material shall be kept to the minimum necessary to efficiently perform the construction activities required. Excavated or stockpiled material shall not be stored in water courses or other areas subject to the flow of surface water; and***
- ***Where feasible, stockpiled material shall be covered with waterproof material during rain events to control erosion of soil from the stockpiles.***

HYD-9: ***Prior to commencement of construction of project facilities, IEUA shall be required to either:***

(1) ***Prepare a No Net Discharge Report demonstrating that within each facility surface runoff shall be collected and retained (for use onsite) or detained and percolated into the ground on the site such that site development results in no net increase in offsite stormwater flows. Detainment shall be achieved through Low Impact Development techniques whenever feasible, and shall include techniques that remove the majority of urban storm runoff pollutants, such as petroleum products and sediment. The purpose of this measure is to remove the onsite contribution to cumulative urban storm runoff and ensure the discharge from the sites is treated to reduce contributions of urban pollutants to downstream flows and to groundwater; or, where it is not feasible to eliminate stormwater flows off of a site or where otherwise appropriate, the Watermaster and/or Implementing Agency shall:***

(2) ***Prepare a grading and drainage plan that identifies anticipated changes in flow that would occur on site and minimizes any potential increases in discharge, erosion, or***

sedimentation potential in accordance with applicable regulations and requirements for the County and/or the City in which the facility would be located. In addition, all new drainage facilities shall be designed in accordance with standards and regulations. The plan shall identify and implement retention basins, best management practices, and other measures to ensure that potential increases in storm water flows and erosion would be minimized, in accordance with local requirements.

HYD-10: To minimize potential ground disturbances associated with installation and maintenance of wellhead treatment at existing wells, the equipment and treatment facilities shall be installed within or along existing disturbed easements or rights-of-way or otherwise disturbed areas, including access roads and pipeline or existing utility easements, whenever feasible.

HYD-11: For long-term mitigation of site disturbances at CBP facility locations, all areas not covered by structures shall be covered with hardscape (concrete, asphalt, gravel, etc.), native vegetation and/or man-made landscape areas (for example, grass). Revegetated or landscaped areas shall provide sufficient cover to ensure that, after a two-year period, erosion will not occur from concentrated flows (rills, gully, etc.) and sediment transport will be minimal as part of sheet flows.

Level of Significance After Mitigation: Less Than Significant

MM **HYD-8** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects.

During project design, overland flows and drainage at each CBP project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by MM **HYD-9**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increase in erosion or sedimentation would occur. Impacts would be less than significant with mitigation.

MM **HYD-10** would require CBP projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may result in substantial siltation or erosion. MM **HYD-11** would require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future CBP facility sites to minimize the potential for erosion on- or off-site to an insignificant level.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant
Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could result in significant impacts to local drainage systems after rapid development of structures. The proposed CBP projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in erosion or siltation. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would require mitigation as identified above, which would reduce the project's contribution to less than cumulatively considerable, therefore reducing the project's contribution to cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

c(ii). Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed wells could alter the existing drainage patterns at each project site. It is not known whether the wells will be installed within developed sites or within sites that are vacant and undeveloped. However, given the small area (less than one half acre) within which the proposed wells will be installed, it is not anticipated that substantial changes in drainage would occur. The construction of proposed facilities would require activities such as pavement breaking, ditching, drilling, excavation and demolition, which would temporarily alter each site's existing ground surface and drainage patterns, and could ultimately provide flooding on- or off-site without preventative measures in place. Compliance with the construction general permit (CGP), Stormwater Pollution Prevention Plan (SWPPP), or San Bernardino and Riverside Counties MS4 Permits (Water Quality Management Plan, WQMP) where applicable would be required; these plans would ensure that drainage and stormwater will not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site.

However, as stated under question c(i) above, given the small size of the site in which the wells would be developed, mitigation to enforce best management practices (BMPs) is provided below to minimize impacts at sites that are less than an acre and are therefore not subject to the CGP or SWPPP. Each of these permits and plans would require the implementation of BMPs that manage overland runoff from construction sites and establish permanent drainage pathways to stabilized outlets. With implementation of such BMPs, compliance with conditions of required permits governing storm water runoff from construction sites, and retention of runoff on site where feasible, the potential for on- or off-site flooding would be reduced to less than significant levels and discharges from construction sites would not exceed the capacity of existing storm water drainage systems. Impacts would be less than significant with mitigation incorporated.

During operation of the proposed wells, the presence of new facilities at each project site and changes in the extent of permeable or impermeable surfaces could alter the direction and volume of overland flows during both wet and dry periods. Implementation of drainage improvements within future CBP project sites during construction will ensure that, during operation, on- and off-

site flooding is minimized to a less than significant level. Mitigation is required to minimize the potential for significant changes to the drainage patterns on- and off-site.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as those identified under Project Category 1; however, it is anticipated that the majority of the facilities proposed as part of Project Category 2 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce impacts to a level of less than significant during construction. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for flooding on- or off-site. Operational impacts would be less than significant.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in flooding onsite or offsite. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under question (b) above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as those identified under Project Category 1 and 2. As stated under Project Category 2, it is anticipated that the majority of the facilities proposed as part of Project Category 4 would be more than one acre in size and as such would be subject to a CGP or SWPPP for development of each individual project. Mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce on- and off-site flooding impacts to a level of less than significant.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs enforced through mitigation provided below would minimize all construction impacts below significance thresholds to a level of less than significant.

The presence of new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. As such, mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce potential on- and off-site impacts to a level of less than significant.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **HYD-8** through **HYD-11** are required to minimize potential on- and off-site flooding impacts in addition to the mitigation provided below.*

Level of Significance After Mitigation: Less Than Significant

MM **HYD-8** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. This measure would control urban runoff and thereby reduce potential on- and off-site flooding.

During project design, overland flows and drainage at each CBP project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by MM **HYD-9**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial increased potential on- or off-site flooding would occur. Impacts would be less than significant with mitigation.

MM **HYD-10** would require CBP projects at existing well sites to remain within disturbed areas wherever feasible to minimize the potential for further ground disturbance at these sites, which may result in on- or off-site flooding. MM **HYD-11** would require all disturbed areas that are not covered in hardscape or vegetation would be revegetated or landscaped at future CBP facility sites to minimize the potential for on- or off-site flooding to an insignificant level.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could experience significant impacts to local drainage systems after rapid development of structures. The proposed CBP projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in flooding on- or off-site. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would require mitigation as identified above, which would reduce the project's contribution to less than cumulatively considerable, therefore reducing cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

c(iii). Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as those discussed under questions c(i) and c(ii) above. Mitigation is required to address the potential for CBP facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the same as those discussed under questions c(i) and c(ii) above. Mitigation is required to address the potential for CBP facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, which would minimize the potential for exceeding the capacity of local stormwater drainage systems.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under question (b) above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as those discussed under questions c(i) and c(ii) above. However, this Project Category includes the development of water treatment facilities that will require brine disposal. As such, mitigation is provided to ensure that any brine generated by the new groundwater treatment facilities or expansion thereof will be disposed of in a manner that would not provide an additional source of polluted runoff. Additionally, as with facilities proposed as part of Project Categories 1 and 2, mitigation is required to address the potential for CBP facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Following implementation of required mitigation measures, impacts would be less than significant.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns, which could result in excess runoff. Compliance with the CGP, SWPPP, County MS4 Permits, and BMPs enforced through mitigation provided below would minimize all construction impacts such that a significant impact would not occur.

The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. As such, mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce potential for CBP facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff and reduce impacts to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **HYD-8** and **HYD-9** are required to minimize potential for CBP facilities to create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. In addition, MM **HYD-12** is required to address potential impacts associated with brine disposal.*

HYD-12: ***All new and expanded water treatment facilities associated with the CBP shall ensure that any brine generated from the water treatment process that cannot be otherwise treated on-site is disposed of in accordance with state and local regulations—such as through disposal to a brine line (Non-Reclaimable Wastewater System, Etiwanda***

Wastewater Line, and Inland Empire Brine Line, etc.)—to prevent brine from being discharged into the local stormwater collection system.

Level of Significance After Mitigation: Less Than Significant

MM **HYD-8** would require implementation of BMPs for projects of less than one acre in size that would be comparable to the requirements of the CGP and SWPPP, which are required for larger projects. This measure would control urban runoff and thereby reduce potential for substantial polluted runoff.

During project design, overland flows and drainage at each CBP project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by MM **HYD-9**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase in offsite discharges would occur and no substantial contribution of runoff to area drainage systems would occur. Impacts would be less than significant with mitigation.

MM **HYD-12** is provided to ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could result in significant impacts to local drainage systems after rapid development of structures. The proposed CBP projects could result in potentially significant impacts associated with the alteration of drainage patterns that result in substantial contribution of runoff to area drainage systems. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would require mitigation as identified above, which would reduce the project's contribution to less than cumulatively considerable, therefore reducing the project's contribution to cumulative impacts to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

c(iv). Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area

in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the mostly the same as those discussed under questions c(i), c(ii), and c(iii) above.

Mitigation is required to address the potential for CBP facilities to ensure that adequate drainage is developed within future CBP sites, which would minimize the potential for the project to impede or redirect flows as drainage within a new site will be managed efficiently.

CBP facilities, including wells may have the potential to impact flows if placed above ground within 100-year floodplains, of which several are located in the large expanse of the Chino Basin. Because the location of future CBP facilities is not presently known, it is not possible to evaluate all of the potential impacts related to an individual CBP project's potential to impede or redirect flows, particularly within known flood hazard areas. Direct impacts to related to flood flows will be assessed through site review and evaluation on a project-by-project basis, after project specifics are known. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) maps provided in the technical appendices will facilitate evaluation of future projects proposed under CBP as they are considered. With this in mind, to reduce potential impacts to a less than significant level, mitigation is outlined, with specific performance standards, which can be implemented to offset or compensate for both the temporal and permanent impacts that might impede or redirect flood flows as a result of future projects associated with the CBP.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The construction activities associated with subsurface facilities, such as pipelines, could temporarily impact flows and would require coordination with County Flood Control and other applicable regulatory agencies before implementation if proposed facilities cross or are within jurisdictional waters or adjacent to flood control channels and easements. However, all other impacts would be the same as those discussed under questions c(i), c(ii), and c(iii) and as those discussed under Project Category 1 above. Given development of conveyance facilities within roadways would result in minimal changes in the roadway drainage pattern once installed as the roadways will be returned to their original or better condition, the potential for a given project to impede or redirect flows would be minimized to a level of insignificance.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would substantially alter the

existing drainage pattern of the Chino Basin, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under question (b) above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be both the same as those discussed under questions c(i), c(ii), and c(iii) and as those discussed under Project Categories 1 and 2 above.

Combined Project Categories

The construction of proposed facilities would require activities that would temporarily alter each project site's existing ground surface and drainage patterns, which could result in impeding or redirecting flood flows. Compliance with the CGP, SWPPP, county MS4 Permits, and BMPs enforced through mitigation provided below would minimize all construction impacts to less than significant levels.

The presence of all new facilities at each project site could change permeable and impermeable surfaces and alter the direction and volume of overland flows. As such, mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce potential for CBP facilities to impede or redirect flood flows. Furthermore, given that the Chino Basin contains areas that are located within flood hazard zones, the development of several facilities in a given area may, when combined, result in a substantial potential to impede or redirect flows; as such, mitigation is required to minimize impacts thereof.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **HYD-9** is required to minimize the potential for CBP facilities to impede or redirect flows in addition to MM **HYD-13** provided below.*

HYD-13: ***IEUA shall verify that any given CBP facility (excepting those located at existing facilities [wells, water treatment plants, etc.] and pipelines and turnouts located belowground) is located outside of the 100-year floodplain by utilizing the FEMA FIRM panels for the selected area prior to project implementation. If a given project is located outside of the 100-year floodplain, then no subsequent CEQA documentation specific to floodplains are required. However, if a project is located within the 100-year floodplain either (1) a new location outside of the 100-year floodplain shall be selected, or (2) a second tier CEQA evaluation shall be completed that would address the given project's location within the 100-year floodplain.***

Level of Significance After Mitigation: Less Than Significant

During project design, overland flows and drainage at each CBP project site would be assessed and drainage facilities would be designed such that no net increase in runoff would occur, in accordance with the Riverside and San Bernardino County MS4 Permits. As required by Mitigation Measure **HYD-9**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure no increase

in offsite discharges would occur and no substantial increased potential for impeding or redirecting flood flows would occur. Impacts would be less than significant with mitigation.

The Chino Basin contains several areas in the 100-year floodplain, particularly given the creeks, channels, and Santa Ana River that are within or along the boundaries of the Chino Basin. As such, mitigation measure **HYD-13** would ensure that future CBP projects located within a floodplain would be further evaluated to determine their potential to impede or redirect flood flows.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in erosion or siltation, flooding, or insufficient capacity of drainage systems. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino County MS4 Permits. Therefore, cumulative development would not result in significant impacts related to drainage during construction.

However, cumulative projects could result in significant impacts to local drainage systems after rapid development of structures. The proposed CBP could result in potentially significant impacts associated with the alteration of drainage patterns that result in flooding that may be impeded or redirected by future projects. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and therefore, would require mitigation as identified above, which would reduce the project's contribution to less than cumulatively considerable, therefore reducing cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

d. Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the mostly the same as those discussed under issue c(iii) and c(iv) above.

As stated under question c(iv) above, CBP facilities, including wells may have the potential to be located within a 100-year floodplain, of which several are located within the large expanse of the Chino Basin, or within an area that could be impacted due to dam failure. The San Bernardino Countywide Plan EIR analyzed inundation potential in the County, including from the San Antonio Dam located north of the Chino Basin. The Countywide Plan EIR concluded that the potential for dam inundation would be less than significant in the Valley region. Furthermore, should the Dam fail, most pollutants, including hazardous materials, would be stored inside of structures and the

potential for pollutants or contaminants to be incorporated and transported due to inundation is considered to be a less than significant impact.

Due to the distance between the Chino Basin and the Pacific Ocean—a distance of more than 25 miles separated by mountains—the risk for tsunami within the Chino Basin is minimal. Furthermore, no large bodies of water are located within the Chino Basin, and as such, there would be no seiche risk to proposed CBP facilities. Because the location of future CBP facilities is not presently known, it is not possible to evaluate all of the potential impacts related to an individual CBP project's potential to risk release of pollutants due to project inundation, particularly within known flood hazard zones. Direct impacts to related to flood flows will be assessed through site review and evaluation on a project-by-project basis, after project specifics are known; which will be enforced through MM **HYD-13**. The FEMA FIRM maps provided in the technical appendices will facilitate evaluation of future projects proposed under CBP as they are considered. With this in mind, to reduce potential impacts to a less than significant level, mitigation is outlined, with specific performance standards, which can be implemented to offset or compensate for both the temporal and permanent impacts that might impede or redirect flood flows as a result of future projects associated with the CBP. Additionally, mitigation that will ensure adequate onsite drainage management is developed is required to address the potential for CBP facilities to release pollutants due to project inundation.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of up to 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts would be the mostly the same as those discussed under questions c(iii) and c(iv) above and the same as those identified under Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, it is not anticipated that this expansion would, in flood hazard zones, risk release of pollutants due to project inundation. Impacts related to the facilities that would facilitate this safe storage capacity expansion are discussed throughout this document, and impacts related to the hydrology of the Chino Basin as a result of this expansion are discussed under question (b) above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as those discussed under questions c(iii) and c(iv) above, and as those discussed under Project Categories 1 and 2 above. However, this Project Category includes the development of water treatment facilities that are anticipated to require brine disposal, as such MM **HYD-13** is provided to ensure that any brine generated by the new groundwater treatment facilities or expansion thereof will be disposed of in a manner that would minimize the potential for CBP facilities to release pollutants due to project inundation.

Combined Project Categories

The presence of all new facilities at each project site could create a new risk for pollutants within a given site to be released as a result of inundation. As such, mitigation to address implementation of a drainage management plan or otherwise retain runoff onsite for each project is required to reduce potential for CBP facilities to risk release of pollutants from inundation. Furthermore, given that the Chino Basin contains areas that are located within flood hazard zones, the development of several facilities in a given area may, when combined, result in a substantial potential to release pollutants as a result of inundation; as such, mitigation is required to minimize impacts thereof.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: MMs **HYD-9**, **HYD-12**, and **HYD-13** are required to minimize the potential for CBP facilities to release pollutants as a result of inundation.*

Level of Significance After Mitigation: Less Than Significant

As required by MM **HYD-9**, either surface runoff shall be collected and retained or a grading and drainage plan would be developed during project design and implemented to ensure that pollutants are managed on site and the potential for risk of release thereof due to inundation is minimized. Impacts would be less than significant with mitigation.

MM **HYD-12** is provided to ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential to release pollutants as a result of inundation. The Chino Basin contains several areas in the 100-year floodplain, particularly given the creeks, channels, and Santa Ana River that are within or along the boundaries of the Chino Basin. As such, MM **HYD-13** would ensure that future CBP projects located within a floodplain would be further evaluated to determine their potential to result in significant impacts related to flood inundation.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Concurrent construction of cumulative development within the Chino Basin area could result in temporary impacts to drainage patterns that may result in flooding. All related projects within the service area would be subject to the same federal, State, and local regulations regarding implementation of BMPs under the CGP, SWPPP, and Riverside and San Bernardino Counties MS4 Permits. Therefore, cumulative development would not result in significant impacts related to flooding or inundation.

However, cumulative projects could experience significant impacts related to release of pollutants due to flooding and inundation. Since the project could result in potential significant impacts, the project's contribution to cumulative impacts is considered cumulatively considerable, and

therefore, would require mitigation as identified above, which would reduce the project's contribution to less than cumulatively considerable, therefore reducing the project's contribution to cumulative impacts under this issue to a level of less than significant.

Level of Significance After Mitigation: Less Than Significant

e. Does the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Watermaster and the IEUA are co-permittees for the Chino Basin maximum-benefit SNMP incorporated in the Basin Plan (see Section 3.4.3.7). The maximum-benefit SNMP was developed pursuant to the OBMP to enable the recharge and reuse of recycled water in the Basin. It defines the management actions that the Watermaster and IEUA must take to manage total dissolved solids (TDS) and nitrate concentrations in Chino Basin groundwater and in the IEUA's recycled water and the TDS and nitrate concentration limitations for recycled water reuse activities. The CBP will be operated such that there is no conflict with or obstruction of the Basin Plan.

As discussed earlier in this section, the planning and operations of the CBP must be carried out in coordination with the Watermaster. The Watermaster administers the Chino Basin Judgment to ensure the sustainable management of the Chino Basin. By implementing any of the mitigation actions that the Watermaster may require to conduct the CBP, the IEUA will ensure that the CBP will not conflict with or obstruct implementation of the Chino Basin stipulated Judgment. Impacts would be less than significant with mitigation incorporated.

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: MM **HYD-1** through **HYD-7** are required to minimize impacts under this issue.*

Level of Significance After Mitigation: Less Than Significant

As stated above, by implementing the mitigation actions that Watermaster may require to conduct the CBP, which are enforceable via MMs **HYD-1** through **HYD-7**, the IEUA will ensure that the CBP will not conflict with or obstruct implementation of the Chino Basin Judgment. These measures would require the Watermaster to continue monitoring efforts to manage the Chino Basin, and to respond to the data gathered through these monitoring efforts with mitigation that would protect MPI and other constraints from occurring to the Chino Basin. As such, with implementation of the above mitigation, the Watermaster would be able to respond to any adverse changes in the Basin with mitigation that would minimize impacts to the Basin. Therefore, implementation of the CBP would have a less than significant potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

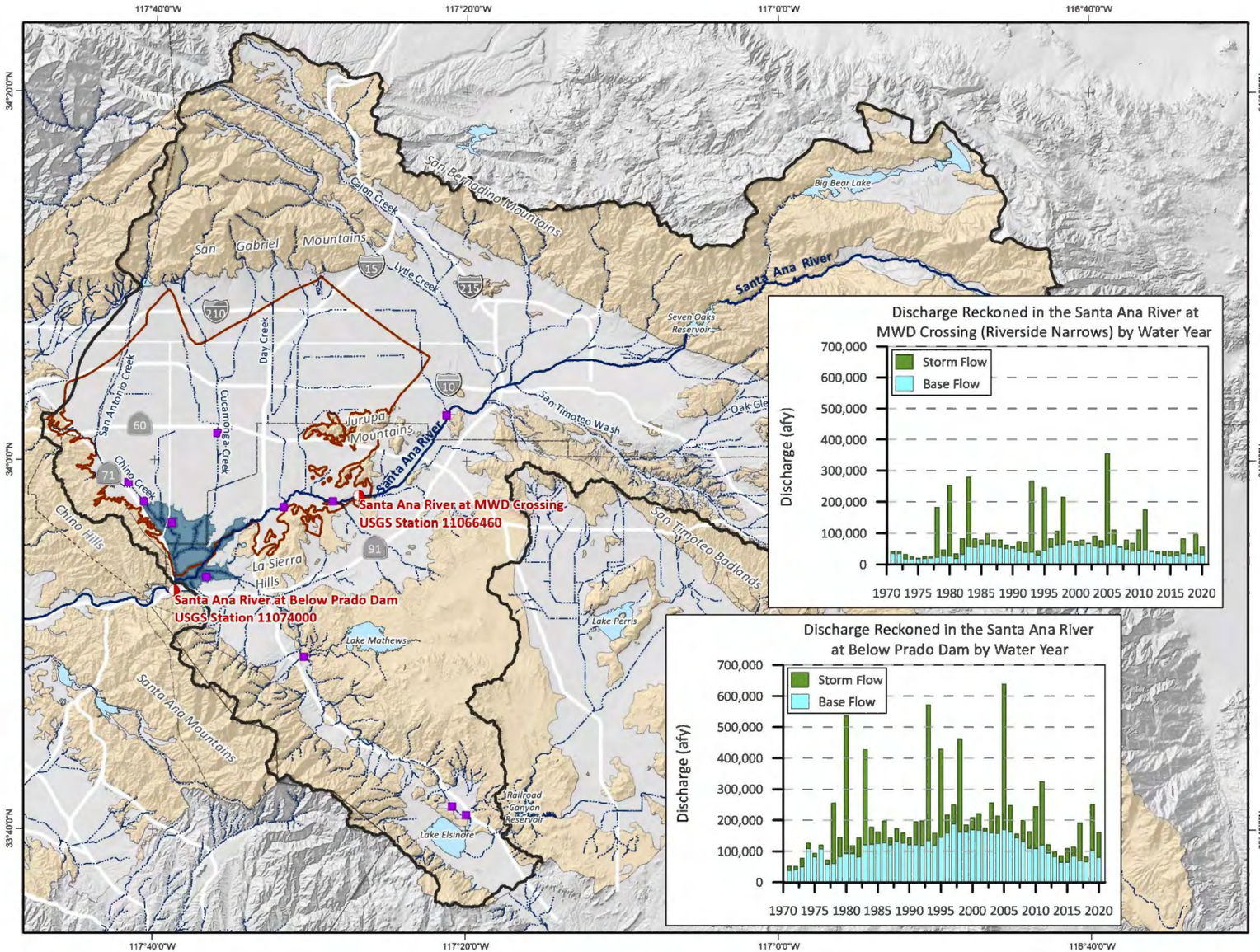
Cumulative impacts that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan would result from cumulative development and water management in the Chino Basin. Since the proposed project only has the potential to impact the Chino Basin, which, as stated above, is an adjudicated basin, the impacts discussion

under this issue are inherently cumulative. Therefore, by implementing the mitigation actions that Watermaster may require to conduct the CBP, which are enforceable via MMs **HYD-1** through **HYD-7**, the IEUA will ensure that the CBP will not contribute to cumulatively considerable impacts on the Basin resulting in the obstruction of implementation of the Chino Basin Judgment. As such, with the implementation of MMs **HYD-1** through **HYD-7**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts under this issue.

Level of Significance After Mitigation: Less Than Significant

4.2.6 Significant and Unavoidable Impacts

As determined in the preceding evaluation, with the implementation of mitigation, the proposed project would have no potential to result in significant and unavoidable hydrology and water quality impacts in the Chino Basin.



SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-1

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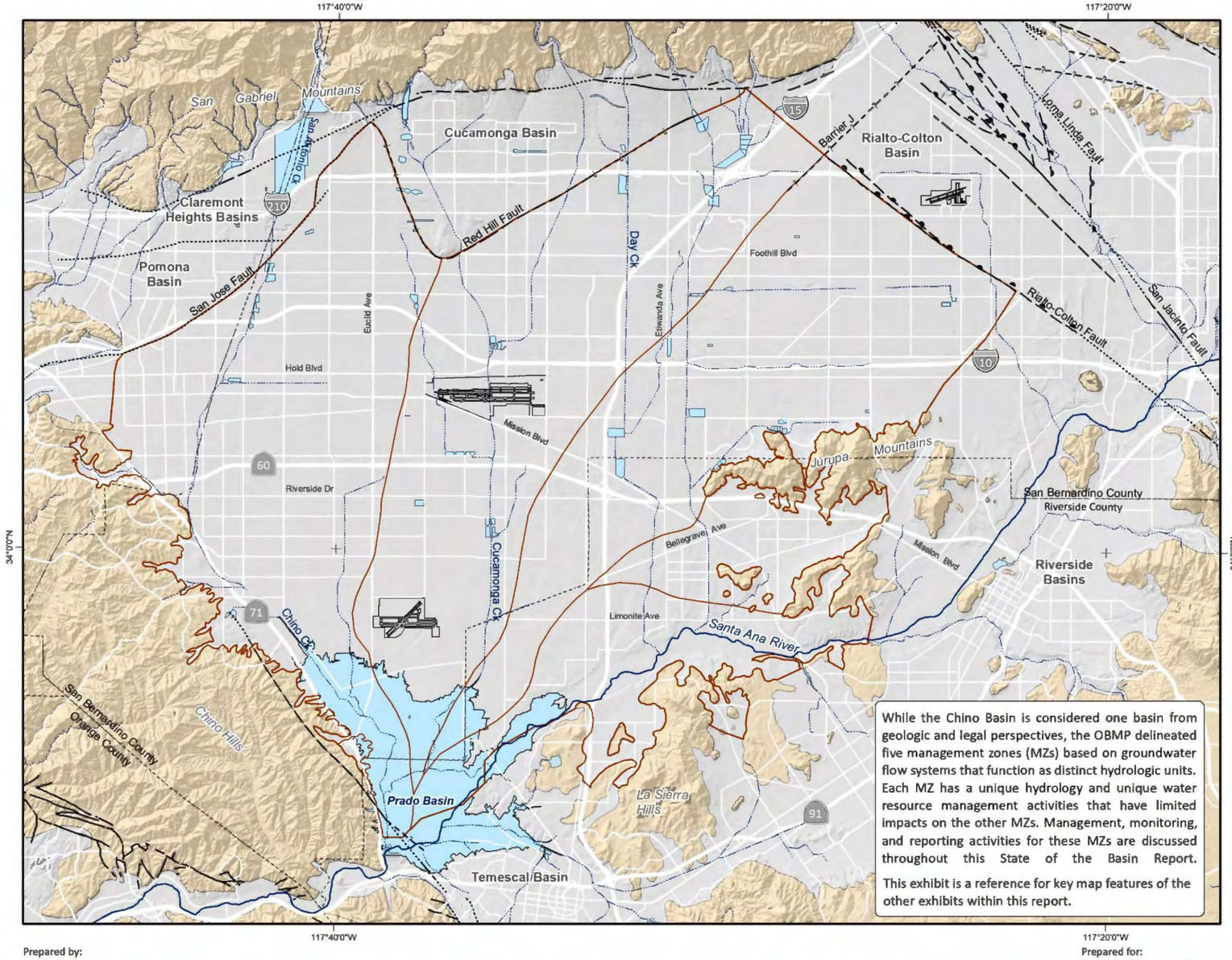
Environmental Consultants

Santa Ana River Discharge in the Chino Basin

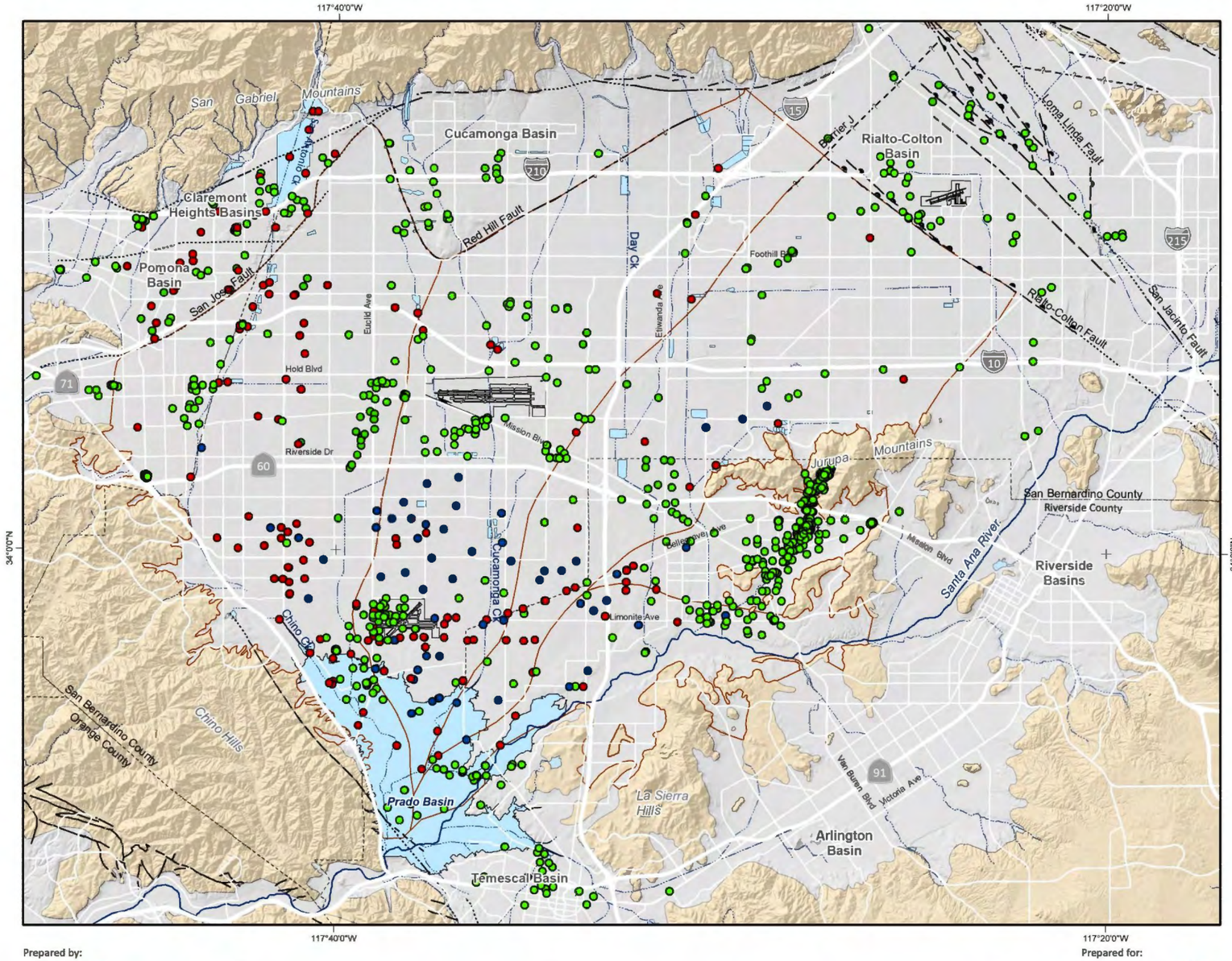


SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-2

Tom Dodson & Associates
Environmental Consultants

Chino Basin Groundwater Basin – Key Map Features



Basin-Wide Groundwater-Level Monitoring Program
Wells symbolized by Measurement Frequency

- Monthly Measurement by Watermaster Staff (61 wells)
- Measurement by Transducer - Every 15 Minutes (185 wells)
- Measurement by Owner at Various Frequencies (1,179 wells)

Other key map features are described in the legend of Exhibit 1-1.

To support OBMP implementation, Watermaster conducts a comprehensive groundwater-level monitoring program. In FY 2019/2020, about 1,400 wells comprised Watermaster's groundwater-level monitoring program. At about 1,200 of these wells, well owners measure water levels and provide the data to Watermaster. These well owners include municipal water agencies, private water companies, the California Department of Toxic Substance Control (DTSC), the County of San Bernardino, and various private consulting firms. The remaining 200 wells are private or dedicated monitoring wells that are mostly located in the southern portion of the Basin. Watermaster staff measures water levels at these wells once a month or with pressure transducers that record water levels once every 15 minutes. These wells were preferentially selected to support Watermaster's monitoring programs for Hydraulic Control, Prado Basin habitat sustainability, land subsidence, and others. All groundwater-level data are collected, compiled, and checked by Watermaster staff, and uploaded to a centralized relational database that can be accessed online through HydroDaVE[SM].

Prepared by:
WEST YOST
Water. Engineered.

Author: EM
Date: 6/20/2021
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0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Levels

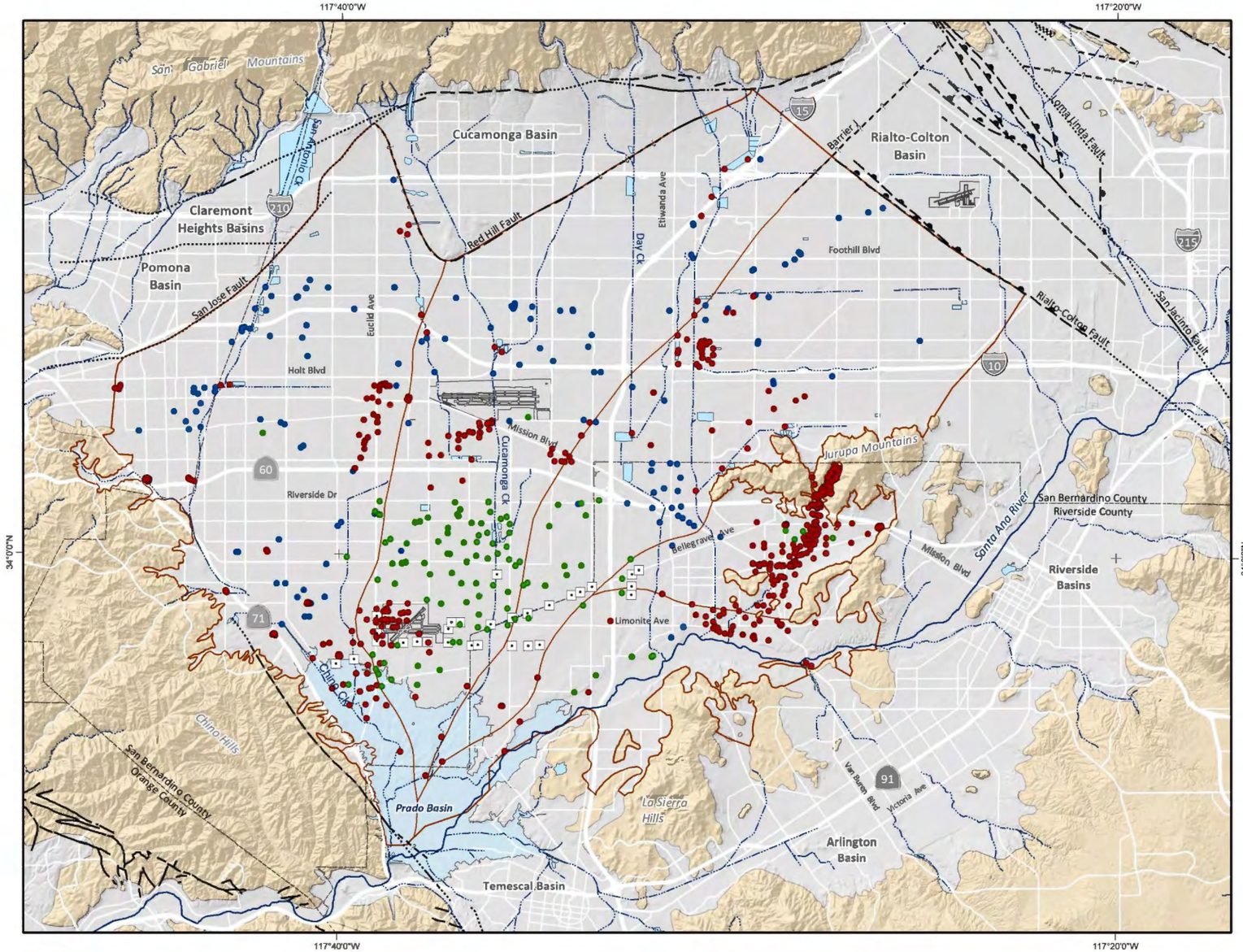
Groundwater-Level Monitoring Network
Well Location and Measurement Frequency During Fiscal Year 2019/2020
Exhibit 4-1

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-3

Tom Dodson & Associates
Environmental Consultants

Groundwater-Level Monitoring Network



Wells with Groundwater Quality Monitoring Data
Between July 2015 and June 2020

- Monitoring (926 wells)
- Municipal (140 wells)
- Private (104 wells)
- Chino Basin Desalter Well (29 wells)

Other key map features are described in the legend of Exhibit 1-1.

Watermaster's current water quality monitoring program relies on municipal producers, government agencies, and others to supply groundwater-quality data on a cooperative basis. Watermaster supplements these data through its own sampling and analysis of private wells and monitoring wells in the area generally south of Highway 60. All groundwater quality data are collected and checked for QA/QC by Watermaster staff and uploaded to a centralized data management system that can be accessed online through HydroDaVE^{SM}. For the July 2015 to June 2020 period, water quality data were available for a total of 1,199 wells within the Chino Basin. Of those, 890 wells were sampled in FY 2019/2020.

Prepared by:
WEST YOST
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Author: LH
Date: 6/1/2021
K:\Clients\941 Chino Basin Watermaster\80-20-15 2020 SOB\GIS\MXD\2020\5_GWQ\Ex_5-1_Wells_with_WQ_Data.mxd

0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Quality

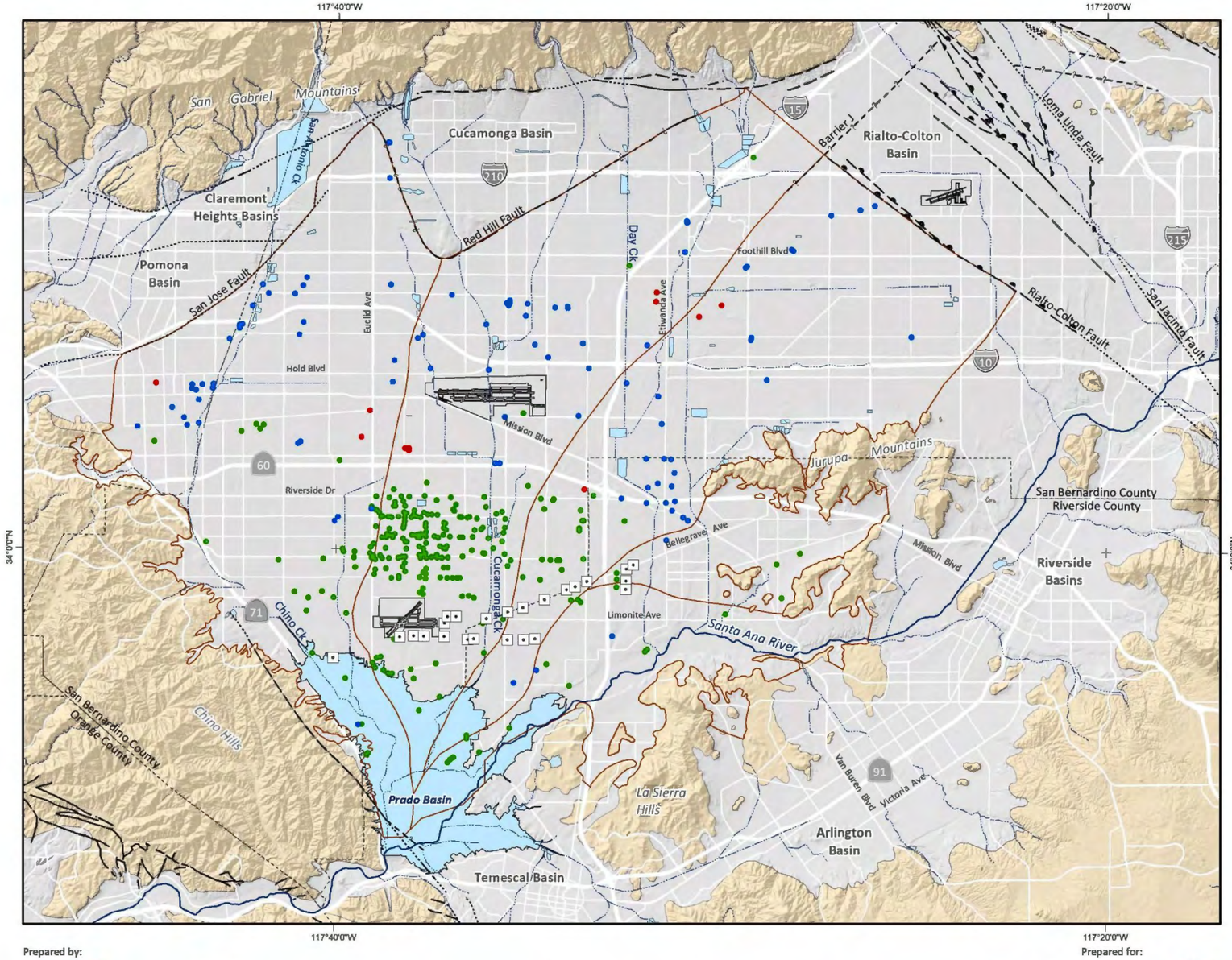
Wells with Groundwater Quality Data
July 2015 - June 2020
Exhibit 5-1

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-4

Tom Dodson & Associates
Environmental Consultants

Wells with Groundwater Quality Data



Active Groundwater Production Wells in Fiscal Year 2019/2020 by Pool

- Agricultural Pool (Pool 1 - 245 Wells)
- Overlying Non-Agricultural Pool (Pool 2 - 11 Wells)
- Appropriative Pool (Pool 3 - 96 Wells)
- Chino Basin Desalter Authority (24 Wells)

Other key map features are described in the legend of Exhibit 1-1.

During FY 2019/2020, 376 production wells were active in the Chino Basin. Total production was about 149,000 af and was divided as follows:

Agricultural Pool:
15,700 af, 10 percent of total production

Overlying Non-Agricultural Pool:
2,300 af, two percent of total production

Appropriative Pool:
95,400 af, 64 percent of total production

Chino Basin Desalters:
35,600 af, 24 percent of total production

Exhibits 3-2 and 3-3 characterize how production has changed over time across the Chino Basin.

Prepared by:
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Date: 5/24/2021
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0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge

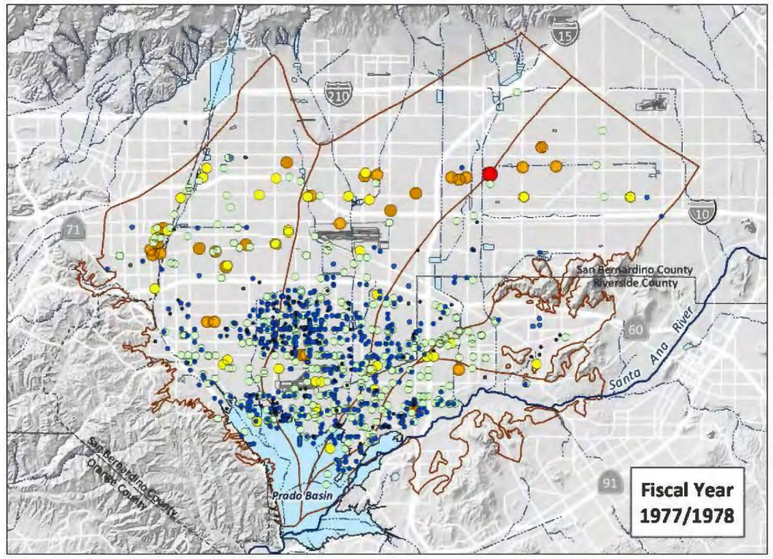
Active Production Wells in the Chino Basin
Fiscal Year 2019/2020
Exhibit 3-1

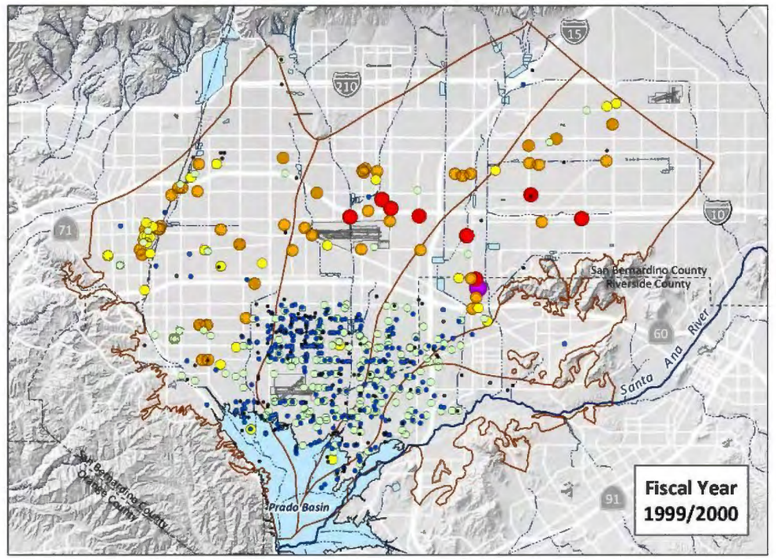
SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

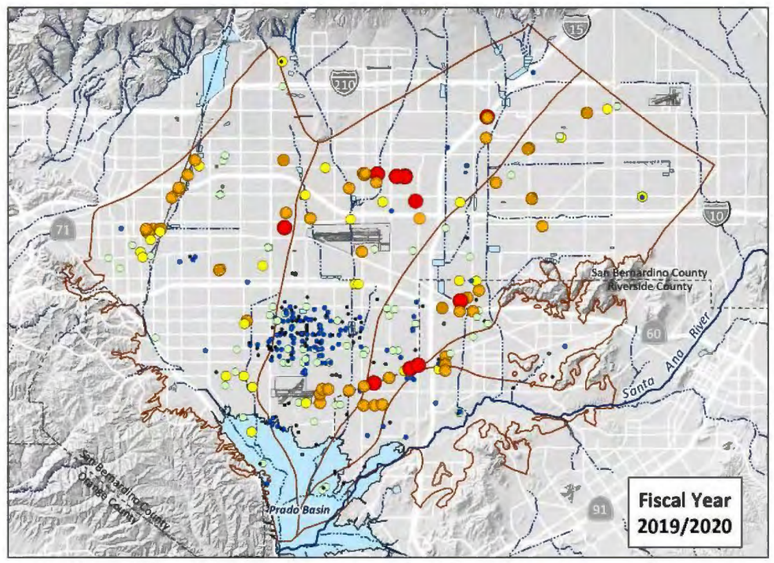
FIGURE 4.11-5

Tom Dodson & Associates
Environmental Consultants

Active Production Wells in the Chino Basin







Groundwater Production (af)

- < 10
- 10 - 100
- 100 - 500
- 500 - 1,000
- 1,000 - 2,500
- 2,500 - 5,000
- > 5,000

Other key map features are described in the legend of Exhibit 1-1.

In FY 1977/1978, production located south of Highway 60 in the Chino Basin was about 93,500 af and production located north of Highway 60 was about 65,300 af, accounting for 59 and 41 percent of total production, respectively. The agricultural production estimate for FY 1977/1978 from the Safe Yield recalculation effort in 2015 was greater than the reported production and primarily occurred south of Highway 60.

Between FY 1977/1978 and FY 1999/2000, groundwater production shifted north, with groundwater production south of Highway 60 declining from 59 to 31 percent of total production. North of Highway 60, production increased from 41 to 69 percent of total production. This shift in production was a result of land use transitions: south of Highway 60, irrigated agricultural land had been largely replaced by dairies, which have lower water use requirements; and north of Highway 60, Appropriative Pool production increased concurrent with urbanization. In FY 1999/2000, after the CDA wells were constructed and came online south of Highway 60 (see Exhibit 3-4), the spatial distribution of pumping began to shift again, south of Highway 60.

The number of wells producing greater than 1,000 afy began to increase from FY 1977/1978 through the present period. This was due to the increase in urbanization, which tends to concentrate production over fewer wells, compared to agricultural production. The construction and operation of the Chino Desalter wells, most of which produce more than 1,000 afy, also contributed to this increase. Despite this increase, the total groundwater production has been declining since 2007 due to the drought conditions, state-mandated water conservation measures, a trend towards greater water conservation, and the economic downturn that occurred in 2008.

Pool	FY 1977/1978 Production		FY 1999/2000 Production		FY 2019/2020 Production	
	af	percentage	af	percentage	af	percentage
Agricultural	87,800	55	44,200	25	15,700	11
Overlying Non-Agricultural	10,100	6	5,600	3	2,300	2
Appropriative	62,400	39	128,900	72	95,400	64
CDA	0	0	0	0	35,600	24
Total	**160,300**	**100**	**178,700**	**100**	**149,000**	**100**

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WEST YOST
Water. Engineered.

Author: SO
Date: 6/1/2021
K:\Clients\941 Chino Basin Watermaster\Chino Basin Master Project\SOB\GIS\MXD\2020\3\Ex_3-3

0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge

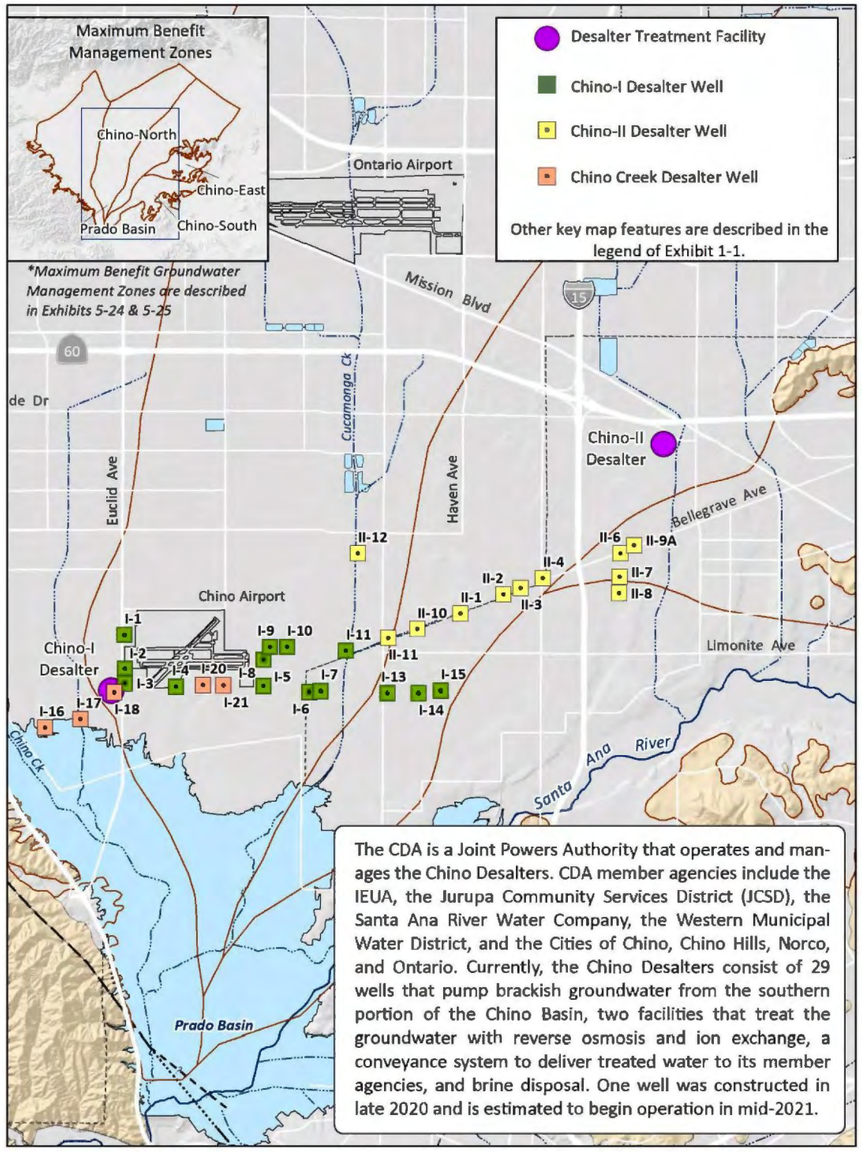
Groundwater Production by Well
Fiscal Year 1977/1978, 1999/2000, and 2019/2020
Exhibit 3-3

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-6

Tom Dodson & Associates
Environmental Consultants

Groundwater Production by Well



The need for the Chino Desalters was described in the OBMP Phase 1 Report. Throughout the 20th century, land uses in the southern portion of the Chino Basin were primarily agricultural. Over time, groundwater quality degraded in this area, and it is not suitable for municipal use unless it is treated to reduce TDS, nitrate, and other contaminant concentrations. The OBMP recognized that urban land uses would ultimately replace agriculture and that if municipal pumping did not replace agricultural pumping, groundwater levels would rise and discharge to the Santa Ana River. The potential consequences would be the loss of Safe Yield in the Chino Basin and the degradation of the quality of the Santa Ana River—the latter of which could impair downstream beneficial uses in Orange County. Mitigating the lost yield and the subsequent degradation of water quality would come with high costs to the Chino Basin parties.

The Chino Desalters were designed to replace the expected decrease in agricultural production and accomplish the following objectives: meet emerging municipal demands in the Chino Basin, maintain or enhance Safe Yield, remove groundwater contaminants, and protect the beneficial uses of the Santa Ana River. Pursuant to the OBMP and the Peace Agreement, Watermaster's goal for desalter production was set at 40,000 afy.

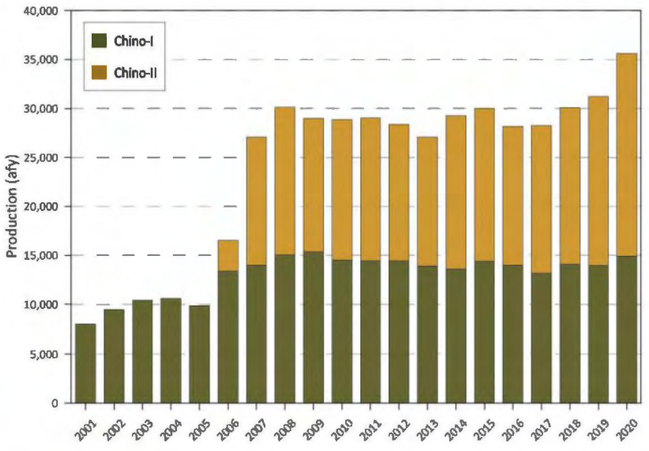
The Chino Desalters also became a fundamental component of the salt and nutrient management plan for the Chino Basin, which was written into the 2004 Water Quality Control Plan for the Santa Ana River Basin ([Basin Plan], Regional Board, 2004)). The Basin Plan adopted maximum-benefit based water quality objectives in the Chino Basin, enabling the implementation of large-scale recycled-water reuse projects in the Chino Basin for direct reuse an indirect potable reuse. Watermaster and the IEUA made nine "maximum-benefit commitments," ensuring that beneficial uses in the Chino Basin will not be impaired by TDS and nitrate, and groundwater management in the Chino Basin will not contribute to the impairment of beneficial uses of the Santa Ana River. The operation of the Chino Desalters is necessary to attain "Hydraulic Control" in the southern portion of Chino Basin. Hydraulic Control is achieved when groundwater discharge from the Chino-North Management Zone to the Santa Ana River is eliminated or reduced to de minimis levels by pumping at the Chino Desalter wells. Hydraulic Control is necessary to maximize the Safe Yield and to prevent degraded groundwater from discharging from the Chino Basin to the Santa Ana River. Four of the nine maximum-benefit commitments are related to the Chino Desalters and Hydraulic Control.

The Chino-I Desalter began operating in 2000 with a design capacity of 8 million gallons per day (mgd) (about 9,000 afy). In 2005, the Chino-I Desalter was expanded to 14 mgd (about 16,000 afy). The Chino-II Desalter began operating in June 2006 at a capacity of 15 mgd (about 17,000 afy). In 2012, the CDA completed construction of the Chino Creek Well Field (CCWF). Production at some of the CCWF wells began in mid-2014, and production at the other CCWF wells began in early 2016, reaching the level of production required to achieve Hydraulic Control. In 2015, the CDA completed the construction of two more wells (I-10 and I-11), and production at these wells started in mid-2018.

In 2020, the CDA completed the construction of the last planned well (II-12) and pumping at this well is expected to begin in late 2021. I n FY 2019/2020, the Chino Desalters pumped about 35,000 afy of groundwater. In June 2020, the Chino Desalters reached the pumping capacity of 40,000 afy, thus, achieving the OBMP production goal. The chart below shows annual groundwater production by the Chino Desalters.

Pursuant to the Peace II Agreement, Watermaster initiated additional controlled overdraft, referred to as "Re-operation." Re-operation is the controlled overdraft of 400,000 af through 2030, allocated specifically to meet the replenishment obligation of the Chino Desalters (WEI, 2009b). An investigation conducted to evaluate the Peace II Agreement and desalter expansion concluded that Re-operation was required to ensure the attainment of Hydraulic Control (WEI, 2007).

Chino Desalter Groundwater Production by Fiscal Year



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Author: SO
Date: 5/24/2021
K:\Clients\941 Chino Basin Watermaster\Chino Basin Master Project\SOB\GIS\MXD\2020\3\Ex_3-4

0 3 Miles
0 4 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge

Chino Basin Dessalter Well Production

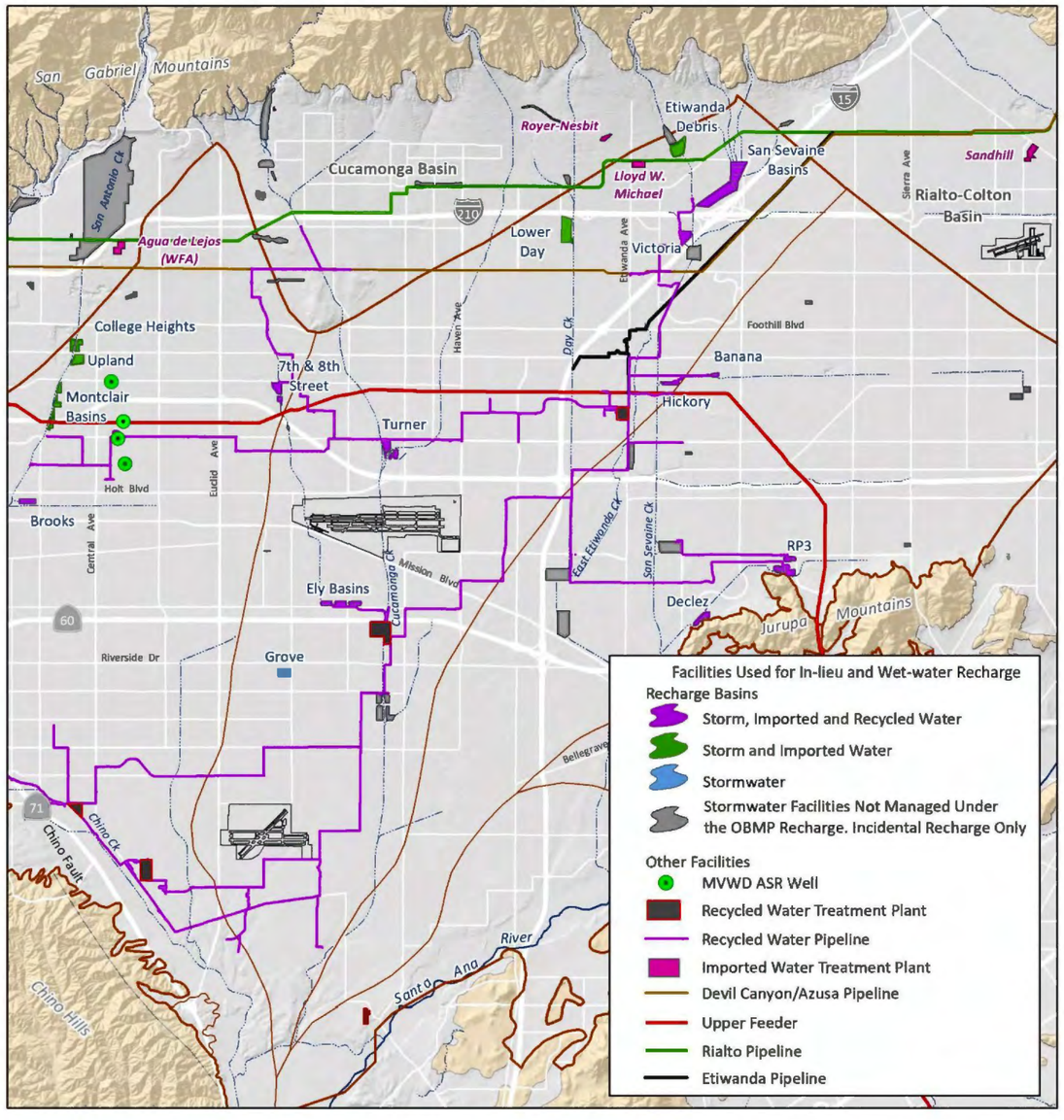
Exhibit 3-4

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-7

Tom Dodson & Associates
Environmental Consultants

Chino Basin Desalter Well Production



Increasing groundwater recharge is an integral part of the OBMP's goals to enhance water supplies and improve water quality, and it is essential for compliance with the maximum-commitments in the Basin Plan. The IEUA, Watermaster, the Chino Basin Water Conservation District, and the San Bernardino County Flood Control District are partners in the planning and implementation of groundwater recharge projects in the Chino Basin. Existing and planned recharge facilities are shown in the map to the left and include recharge basins and Aquifer Storage and Recovery (ASR) wells, not shown on the map are the municipal separate storm sewer system (MS4) facilities.

Recharge basins. Imported water, stormwater, dry-weather flow, and recycled water are recharged at 17 recharge basins. Watermaster has permits from the State Water Resources Control Board (State Water Board) to divert stormwater and dry-weather flow to the basins for recharge and storage, and subsequently recover it for beneficial use. Since about 2004, water-level sensors have been installed at most of the recharge basins. These sensors are used to estimate recharge and measure infiltration rates. The estimated recharge is then used in Sustainable Groundwater Management Act (SGMA) reporting, in determining compliance with maximum benefit commitments and recharge permits, in Safe Yield calculations, and for scheduling maintenance.

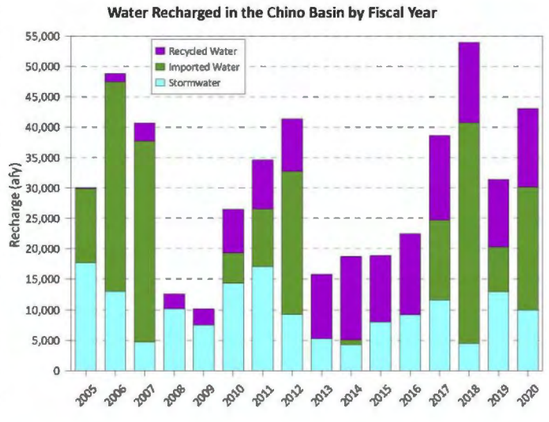
ASR wells. ASR wells are used to inject treated imported water into the Basin and to pump groundwater. The Monte Vista Water District (MVWD) owns and operates four ASR wells in the Chino Basin.

In-lie u recharge. In-lieu recharge can occur when a Chino Basin Party with pumping rights in the Chino Basin elects to use supplemental water directly in lieu of pumping some or all its rights in the Chino Basin for the specific purpose of recharging supplemental water.

MS4 facilities. The 2013 RMPU implementation included a process to create and update a database of all known runoff management projects implemented through the MS4 permits in the Chino Basin. This was done to create the data necessary to evaluate the significance of new stormwater recharge created by MS4 projects. As of FY 2016/2017, a total of 114 MS4 projects were identified as complying with the MS4 permit through infiltration features. These 114 projects have an aggregate drainage area of 1,733 acres.

Watermaster maintains a database of monthly recharge volumes by water type and recharge location. The chart below shows annual wet-water recharge at recharge basins and ASR wells by water type since the initiation of the recharge program in FY 2004/2005 (dry-weather flow is included with stormwater). With OBMP implementation, recycled water has become a significant portion of annual recharge, totaling around 13,000 af in FY 2019/2020 and averaging about 12,900 afy over the past five years. Recycled water recharge reduces the need for and dependence on imported water for replenishment.

The annual magnitude of imported water recharge at recharge basins fluctuates based on the need for replenishment water, conjunctive-use operations, imported water availability, and other factors. In years where imported water has been recharged in basins for conjunctive-use operations, it has ranged from about 2,400 to 35,000 afy. And in the other non-conjunctive-use influenced years, imported water recharge has varied from 0 to about 35,000 afy.



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Date: 6/1/2021
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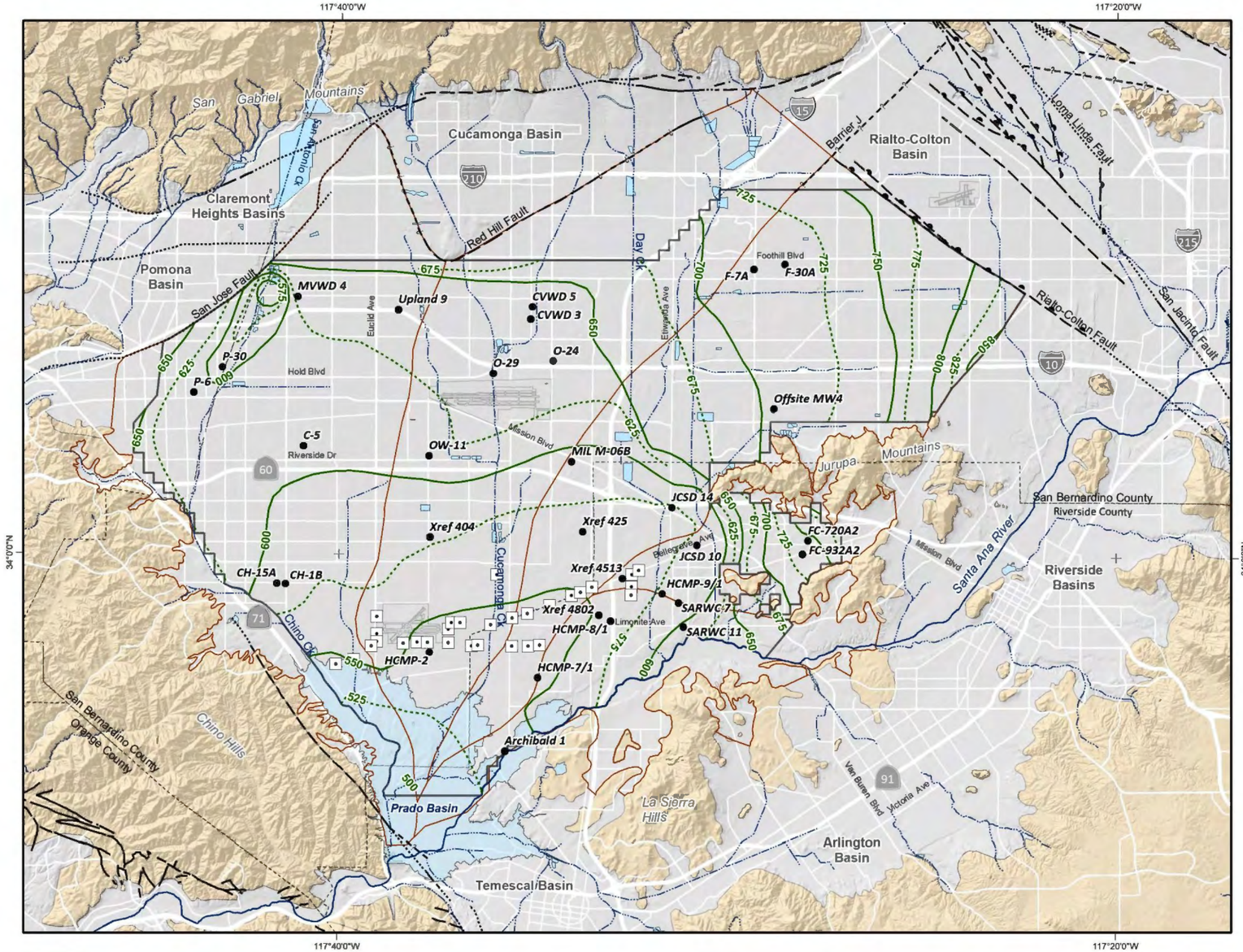
Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Basin Production and Recharge

Groundwater Recharge in the Chino Basin

Exhibit 3-5

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-8



800 Groundwater-Elevation Contours (feet above mean sea-level)

Boundary of Contoured Area (contours are not shown outside of this boundary due to lack of groundwater-level data)

Well With a Groundwater-Level Time History Plotted on Exhibits 4-10 through 4-14

Chino Desalter Wells

Other key map features are described in the legend of Exhibit 1-1.

This map displays contours of equal groundwater elevation across the Chino Basin during the spring of 2020, showing the effects of about 20 years of OBMP implementation. The contours are generally consistent with the groundwater-elevation contours for spring 2018, indicating regional groundwater flow in a south-southwest direction from the primary areas of recharge in the northern parts of the Basin toward the Prado Basin in the south. There continued to be a discernible depression in groundwater levels around the eastern portion of the Chino Basin Desalter well field, which demonstrates the achievement of Hydraulic Control in this area. This depression merged with the pumping depression around the JCSD well field to the east and increased the hydraulic gradient from the Santa Ana River toward the desalter well field. As was the case in 2000 and 2018, there continues to be a notable pumping depression in the groundwater-level surface in the northern portion of MZ1 (Montclair and Pomona areas).

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Author: TA
Date: 6/21/2021
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0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Levels

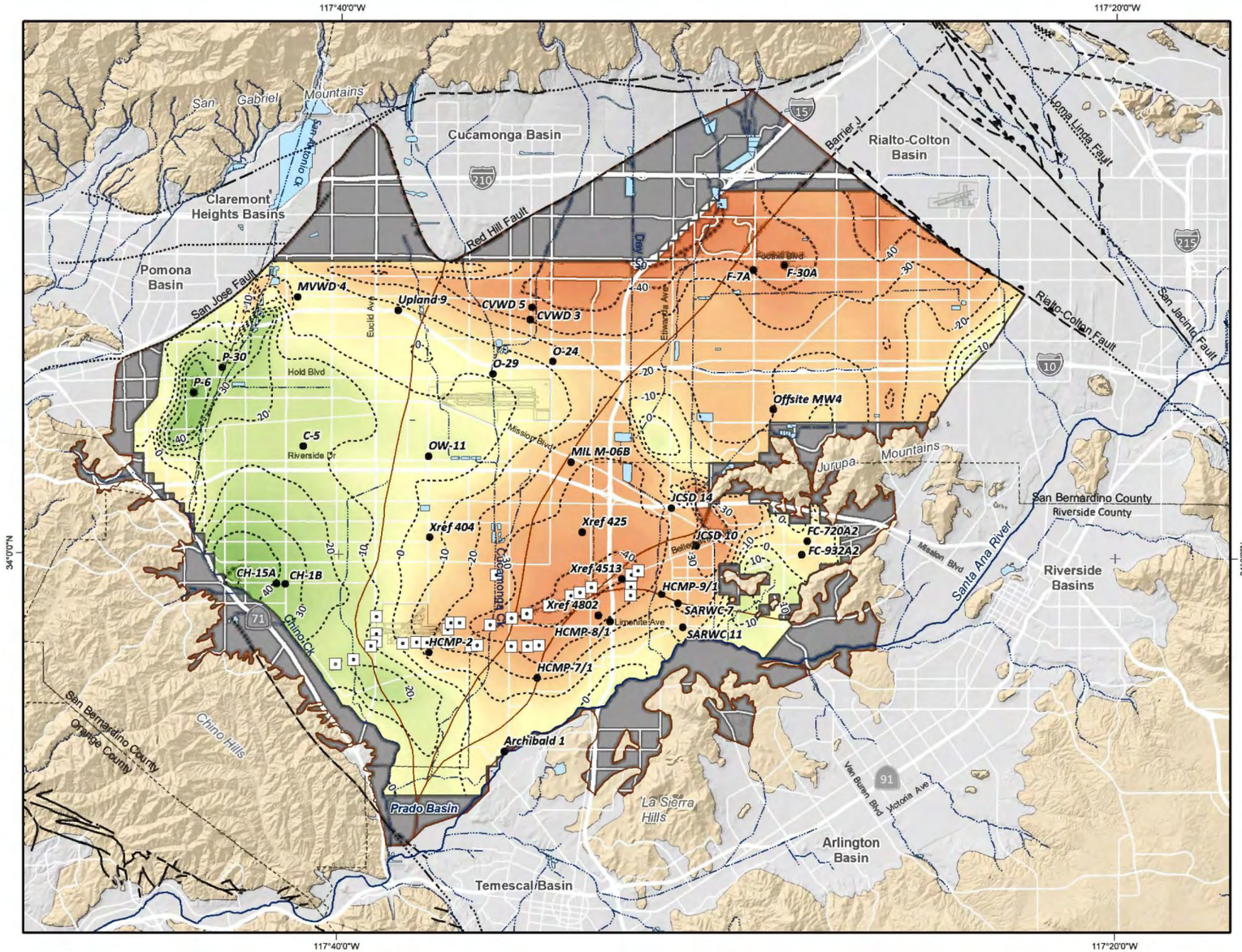
Groundwater-Elevation Contours for Spring 2020
Shallow Aquifer System
Exhibit 4-4

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-9

Tom Dodson & Associates
Environmental Consultants

Groundwater-Elevation Contours for Spring 2020



Contour of Groundwater-Level Change (foot)
Spring 2000 to Spring 2020

Groundwater-Level Change (foot)
Spring 2000 to Spring 2020

+100 Increase

-100 Decrease

Area Not Included in the Change Calculation Due to Lack a of Groundwater-level Data

Well With a Groundwater-Level Time History Plotted on Exhibits 4-10 through 4-14

Chino Desalter Well

Other key map features are described in the legend of Exhibit 1-1.

This map shows the change in groundwater elevation during the 20-year period of OBMP implementation: spring 2000 to spring 2020. This map was created by subtracting a rasterized grid created from the groundwater elevations for spring 2000 (Exhibit 4-2) from a rasterized grid created from the groundwater elevations for spring 2020 (Exhibit 4-4).

Groundwater levels have increased in the western portion of the Basin. Groundwater levels have decreased in the central and eastern portions of the Basin and around the eastern portion of the Chino Desalter well field in the south. The changes in groundwater elevation shown here are consistent with projections from Watermaster's groundwater modeling efforts (WEI, 2003a; 2007c; 2015d; 2020) that simulated changes in the groundwater levels and flow patterns from the production and recharge strategies described in the Judgment, OBMP, Peace Agreement, and Peace II Agreement. These strategies include: desalter production in the southern portion of the Basin; controlled overdraft through Basin Re-operation to achieve Hydraulic Control; subsidence management in MZ1; mandatory recharge of Supplemental Water in MZ1 to improve the balance of recharge and discharge; and facilities improvements to enhance the recharge of storm, recycled, and imported waters.

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Author: TA
Date: 6/23/2021
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0 3 6 Miles
0 4 8 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Levels

Groundwater-Level Change from Spring 2000 to Spring 2020
Shallow Aquifer System

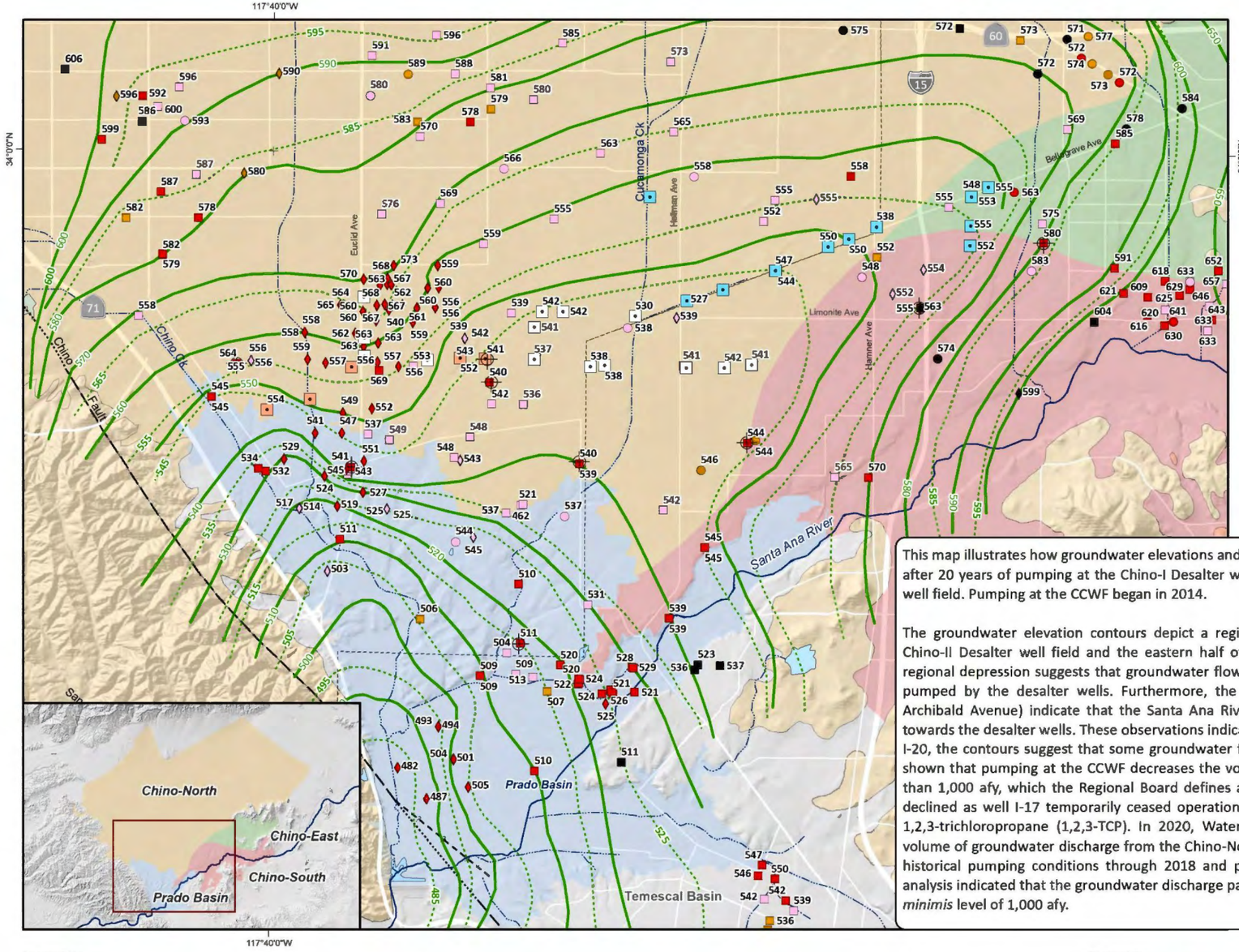
Exhibit 4-5

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-10

Tom Dodson & Associates
Environmental Consultants

Groundwater-Level Change from Spring 200 to Spring 2020



~800~ Groundwater-Elevation Contours (feet above mean sea-level)

Water-Level Qualification Symbol Code (Showing Groundwater Elevation)

- Static
- Recovering
- Estimated Static
- Dynamic

Aquifer Layer Where Well Casing is Perforated

- Layer 1
- Layers 1 & 2
- Layers 1 & 2 & 3
- Unknown Well Construction

- Chino-I Desalter Well
- Chino-II Desalter Well
- Chino Creek Desalter Well
- HCMP Monitoring Well

Numbers next to well indicate groundwater elevation

Other key map features are described in the legend of Exhibit 1-1.

This map illustrates how groundwater elevations and flow directions have changed in the southern Chino Basin after 20 years of pumping at the Chino-I Desalter well field and 14 years of pumping at the Chino-II Desalter well field. Pumping at the CCWF began in 2014.

The groundwater elevation contours depict a regional depression in groundwater levels surrounding the Chino-II Desalter well field and the eastern half of the Chino-I Desalter well field (east of well I-20). This regional depression suggests that groundwater flowing south in the Chino-North GMZ is being captured and pumped by the desalter wells. Furthermore, the contours southeast of the desalter well field (east of Archibald Avenue) indicate that the Santa Ana River is recharging the Chino Basin and flowing northwest towards the desalter wells. These observations indicate that Hydraulic Control is achieved east of I-20. West of I-20, the contours suggest that some groundwater flows past the desalter wells. Groundwater modeling has shown that pumping at the CCWF decreases the volume of groundwater flow past the desalter wells to less than 1,000 afy, which the Regional Board defines as *de minimis* discharge. In 2017, pumping at the CCWF declined as well I-17 temporarily ceased operation due to the new maximum contaminant level (MCL) for 1,2,3-trichloropropane (1,2,3-TCP). In 2020, Watermaster used its groundwater model to determine the volume of groundwater discharge from the Chino-North GMZ to the Prado Basin GMZ past the CCWF for both historical pumping conditions through 2018 and projected pumping conditions through 2050. The model analysis indicated that the groundwater discharge past the CCWF into Prado Basin was always less than the *de minimis* level of 1,000 afy.

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Water. Engineered.

Author: TA
Date: 6/21/2021
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0 1 2 Miles
0 1 2 Km

Prepared for:
Chino Basin Watermaster
2020 State of the Basin Report
Groundwater Levels

State of Hydraulic Control in Spring 2020
Shallow Aquifer System
Exhibit 4-8

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-11

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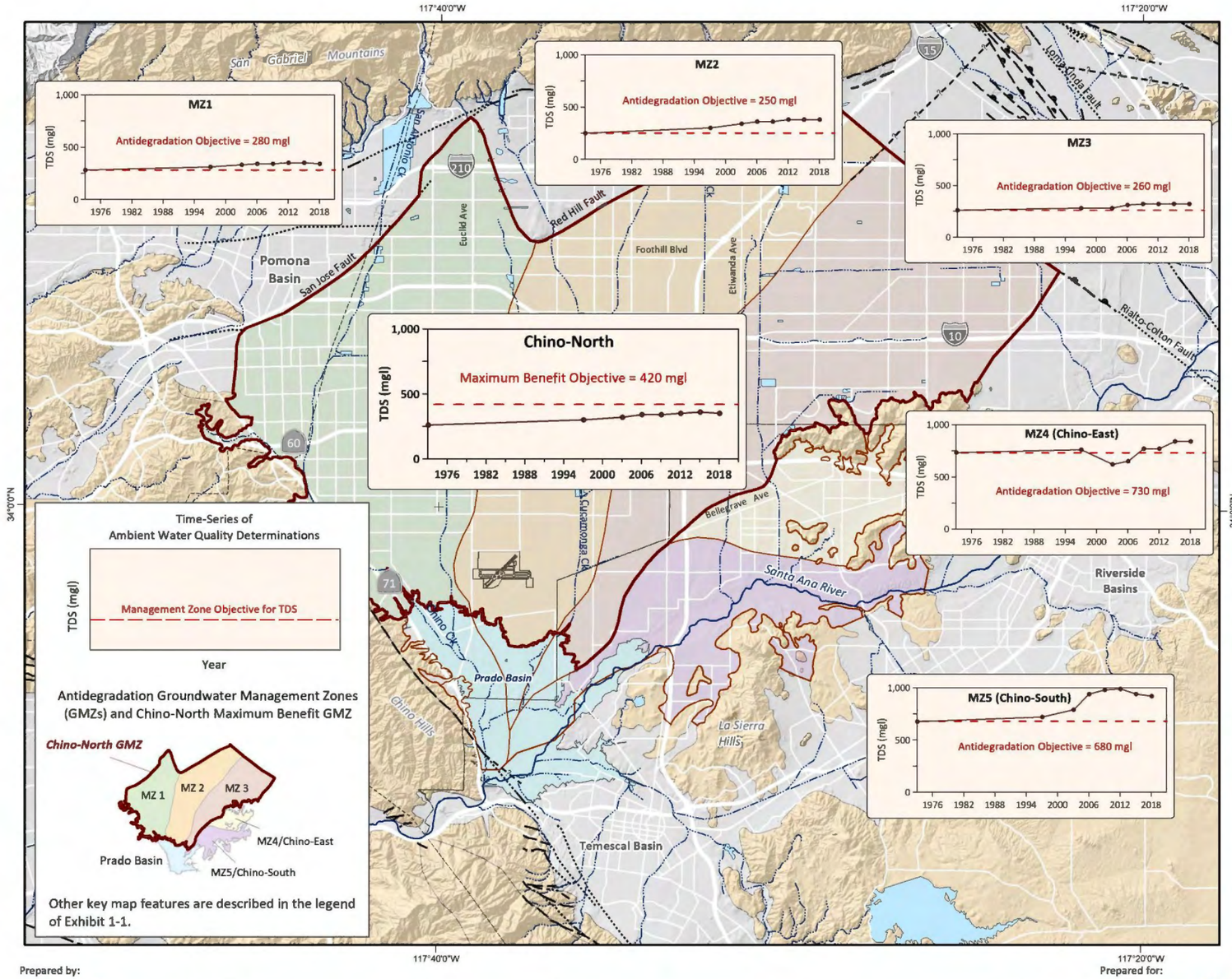
Environmental Consultants

State of Hydraulic Control in Spring 2020



The ambient water quality (AWQ) of GMZs in the Santa Ana Watershed are computed on a triennial basis and compared with the groundwater-quality objectives defined in the Basin Plan to determine assimilative capacity for TDS and nitrate, and to assess if waste discharge requirements are protective of groundwater quality. AWQ represents the volume-weighted average concentration for a GMZ, and is derived from water quality statistics computed at wells based on a 20-year time-history of sample results.

In the Chino Basin, the Chino-North GMZ maximum-benefit objective is used as the measure of compliance to permit recycled water discharge and reuse. The Chino-North GMZ is the combined extent of MZ1, MZ2, and MZ3 up-gradient of the Prado Basin. The Chino-North maximum-benefit objective is numerically higher than the individual anti-degradation objectives set for MZ1, MZ2, and MZ3. If Watermaster and the IEUA do not implement the specific projects and programs described in the Chino Basin maximum-benefit commitments in the Basin Plan (Table 5-8), the anti-degradation objectives will apply, and Watermaster and the IEUA will be required to mitigate TDS and nitrate loading from recycled water discharge and reuse above the anti-degradation objectives.

AWQ determinations have been made for eight 20-year periods: 1954-1973, 1978-1997, 1984-2003, 1987-2006, 1990-2009, 1993-2012 (WEI, 2000; 2005b; 2008a; 2011b; and 2014), 1996-2015 (DBS&A, 2017), and 1999-2018 (WSC, 2020). From 1973 to 2018, the ambient TDS concentration for Chino-North increased from 260 to 350 mg/l, but remains below the maximum-benefit objective of 420 mg/l, and 70 mg/l of assimilative capacity remains. When the current ambient TDS exceeds the maximum-benefit objective, there will be a mitigation requirement for the recharge and direct use of recycled water.

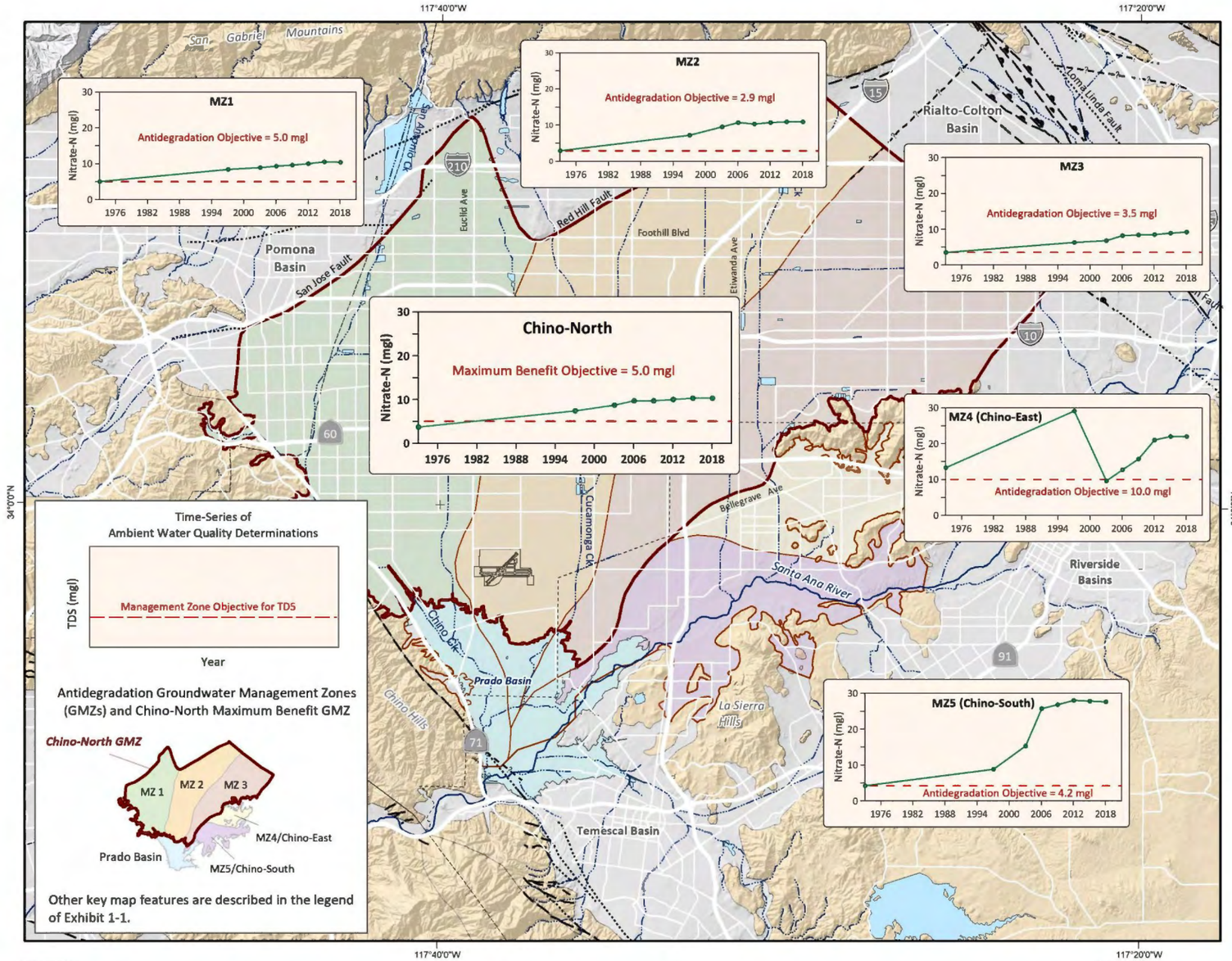
In the Chino-East and Chino-South GMZs, the current ambient TDS concentrations are greater than the objectives. Because the TDS concentration of the recycled water reused by the Chino Basin parties in these GMZs is less than the antidegradation objectives of 730 and 680 mg/l, there are no regulatory compliance challenges.

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-12

Tom Dodson & Associates
Environmental Consultants

Trends in Ambient Water Quality Determinations for Total Dissolved Solids by Groundwater Management Zone



From 1973 to 2018, the ambient nitrate in Chino-North increased from 3.7 to 10.3 mgl, and is currently above the maximum benefit objective of 5.0 mgl. To ensure recycled water recharge in the Chino-North GMZ is in compliance with the maximum benefit objective, Watermaster and the IEUA must recharge low-nitrate imported water and storm waters such that the 12-month, volume-weighted concentration of the all recharge sources (storm water, recycled water, and imported water) is less than or equal to the maximum-benefit objective of 5.0 mgl.

In the Chino-East GMZ, the current ambient nitrate concentration is about two to three times greater than the antidegradation objective of 10 mgl, and has been increasing since 1973.

In the Chino-South GMZ, the current ambient nitrate concentration is about six times greater than the antidegradation objective of 4.2 mgl, and has also been increasing since 1973.

For all GMZs, the increase in ambient concentrations is likely related to an increase in the data available to perform the calculations since the implementation of the OBMP monitoring programs, opposed to actual the degradation of water quality.

Trends in Ambient Water Quality Determinations for Nitrate as Nitrogen By Groundwater Management Zone

Exhibit 5-25

SOURCE: Chino Basin Watermaster 2020 State of the Basin Report prepared by West Yost dated June 2021

FIGURE 4.11-13

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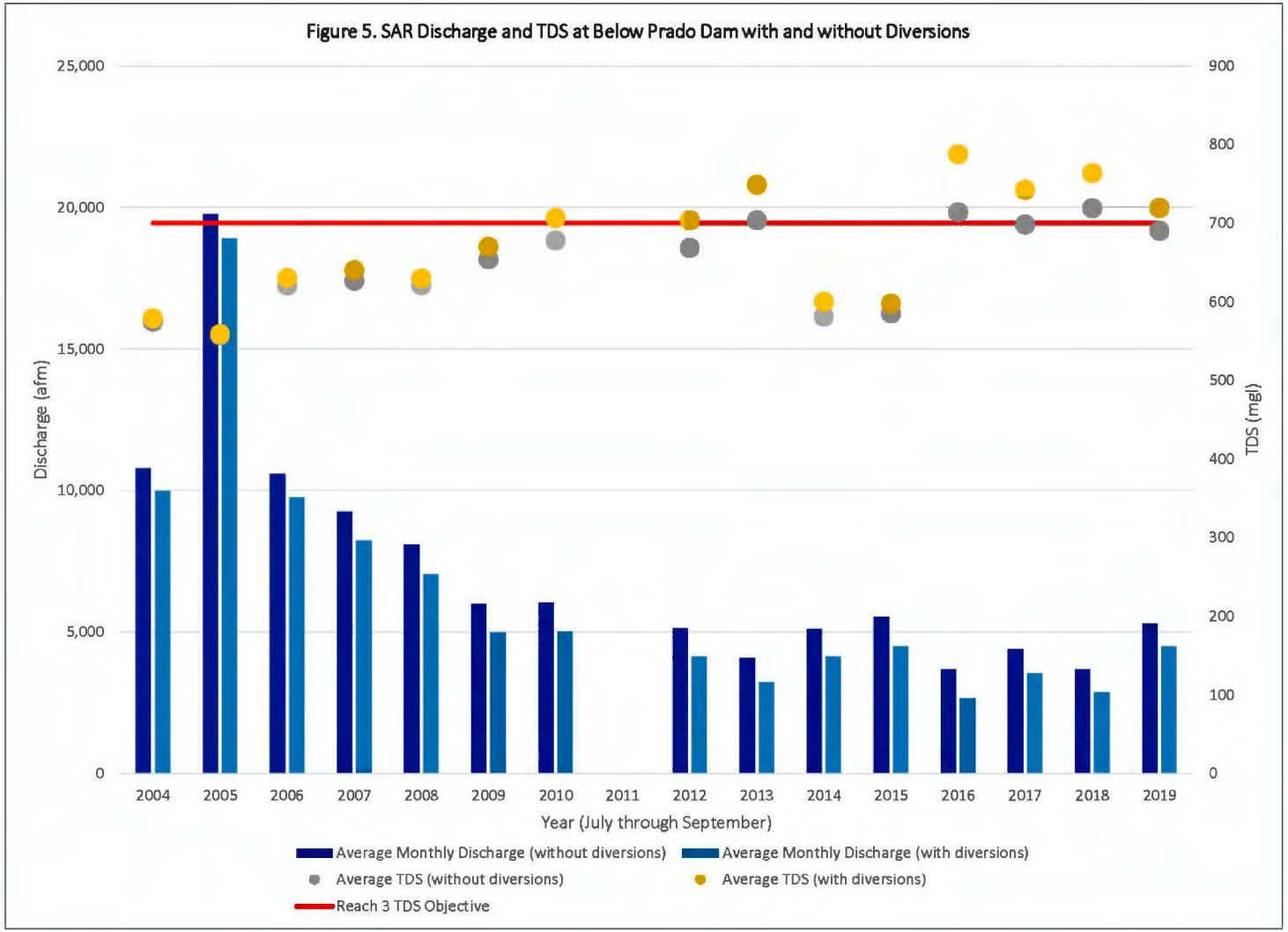
Trends in Ambient Water Quality Determinations for Nitrate as Nitrogen by Groundwater Management Zone

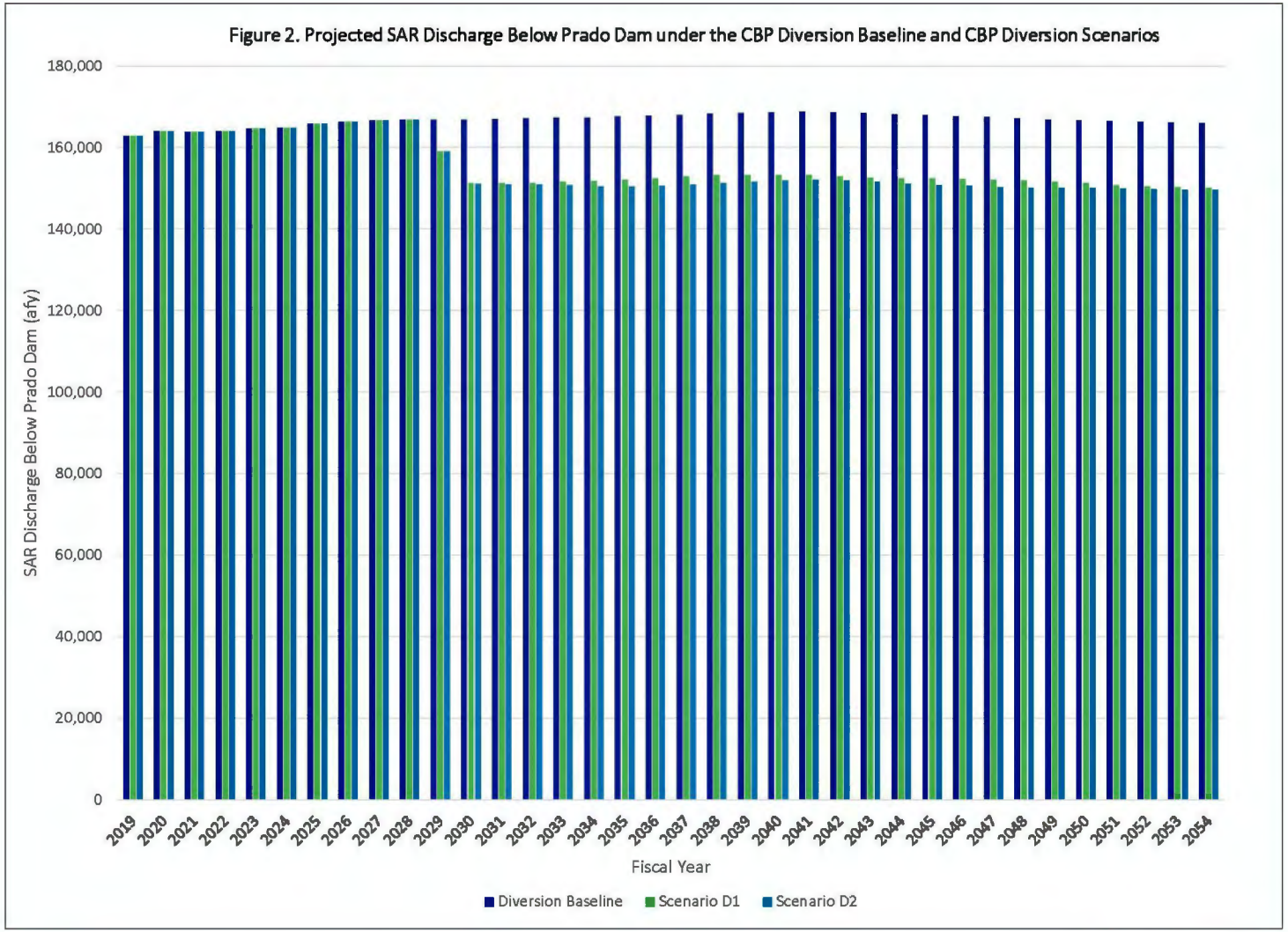


SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-14

Tom Dodson & Associates
Environmental Consultants

SAR Discharge and TDA at Below Prado Dam With and Without Diversions

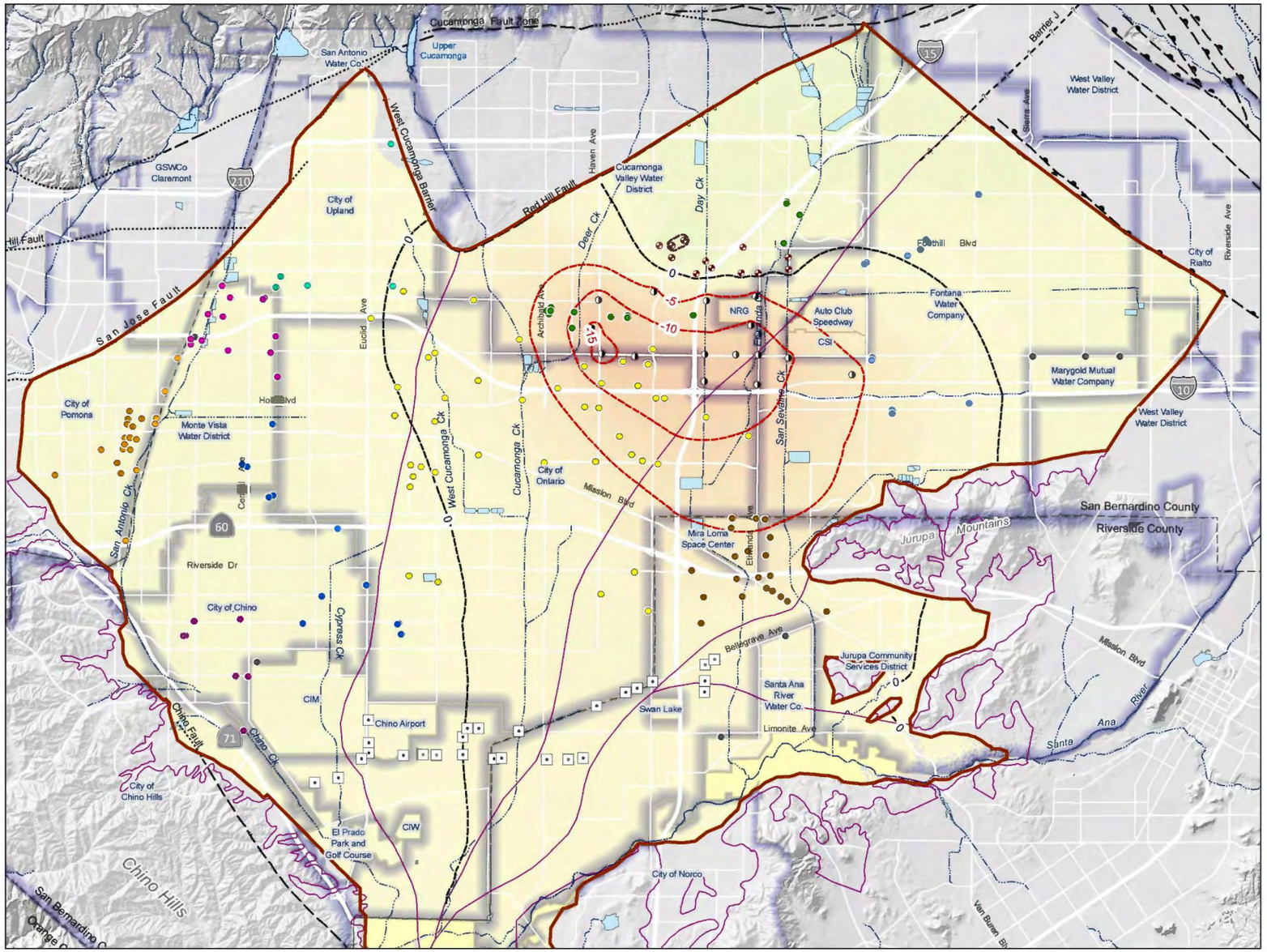


SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-15

Tom Dodson & Associates
Environmental Consultants

Project SAR Discharge Below Prado Dam Under the CBP Diversion Baseline and CBP Diversion Scenarios



Contour of Difference in Groundwater Level (ft)
Positive Difference *Scenario 1 minus Baseline (Jan. 2054)*

Contour of Difference in Groundwater Level (ft)
Negative Difference *Scenario 1 minus Baseline (Jan. 2054)*

Difference in Groundwater Level (ft)
January 2054 - Scenario 1 minus Baseline

50
0
-50

Areas where Scenario will result in higher groundwater levels than the Baseline

Areas where Scenario will result in lower groundwater levels than the Baseline

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

Chino Desalter Wells

Active CBP Injection Well

Active CBP Extraction Well

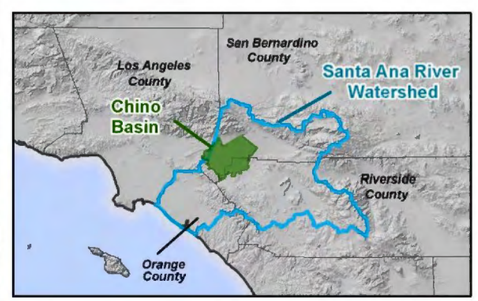
Streams & Flood Control Channels

Flood Control & Conservation Basins

Water Service Area

Chino Basin Part of the Active CVM MODFLOW Domain

OBMP Management Zones



Prepared by:
WEST YOST

Author: GR
Date: 10/4/2021
File: Fig7 GWLch S1-BL 2054.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Evaluation of the Chino Basin Program

Prepared for:
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Projected Difference in Groundwater Levels for Layer 1
Scenario 1 minus Baseline (January 2054)

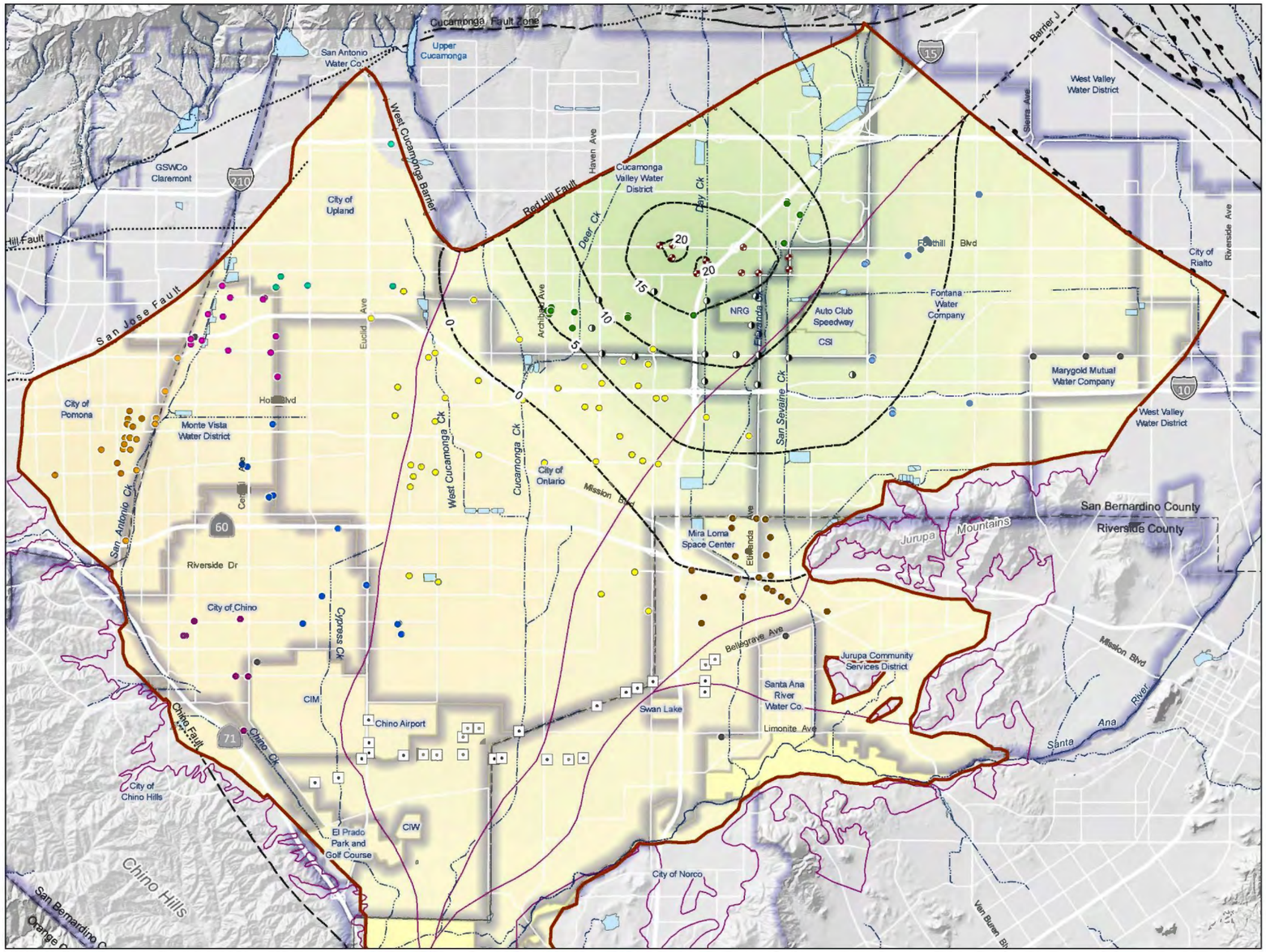
Figure 7

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-16

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 1



Contour of Difference in Groundwater Level (ft)
Positive Difference *Scenario 2 minus Baseline (Jan. 2054)*

Contour of Difference in Groundwater Level (ft)
Negative Difference *Scenario 2 minus Baseline (Jan. 2054)*

Difference in Groundwater Level (ft)
January 2054 - Scenario 2 minus Baseline

50
0
-50

Areas where Scenario will result in higher groundwater levels than the Baseline

Areas where Scenario will result in lower groundwater levels than the Baseline

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

Chino Desalter Wells

Active CBP Injection Well

Active CBP Extraction Well

Streams & Flood Control Channels

Flood Control & Conservation Basins

Water Service Area

Chino Basin Part of the Active CVM MODFLOW Domain

OBMP Management Zones

Prepared by:
WEST YOST

Author: GR
Date: 10/4/2021
File: Fig10 GWLch S2-BL 2054.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Evaluation of the Chino Basin Program

Prepared for:
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Projected Difference in Groundwater Levels for Layer 1
Scenario 2 minus Baseline (January 2054)

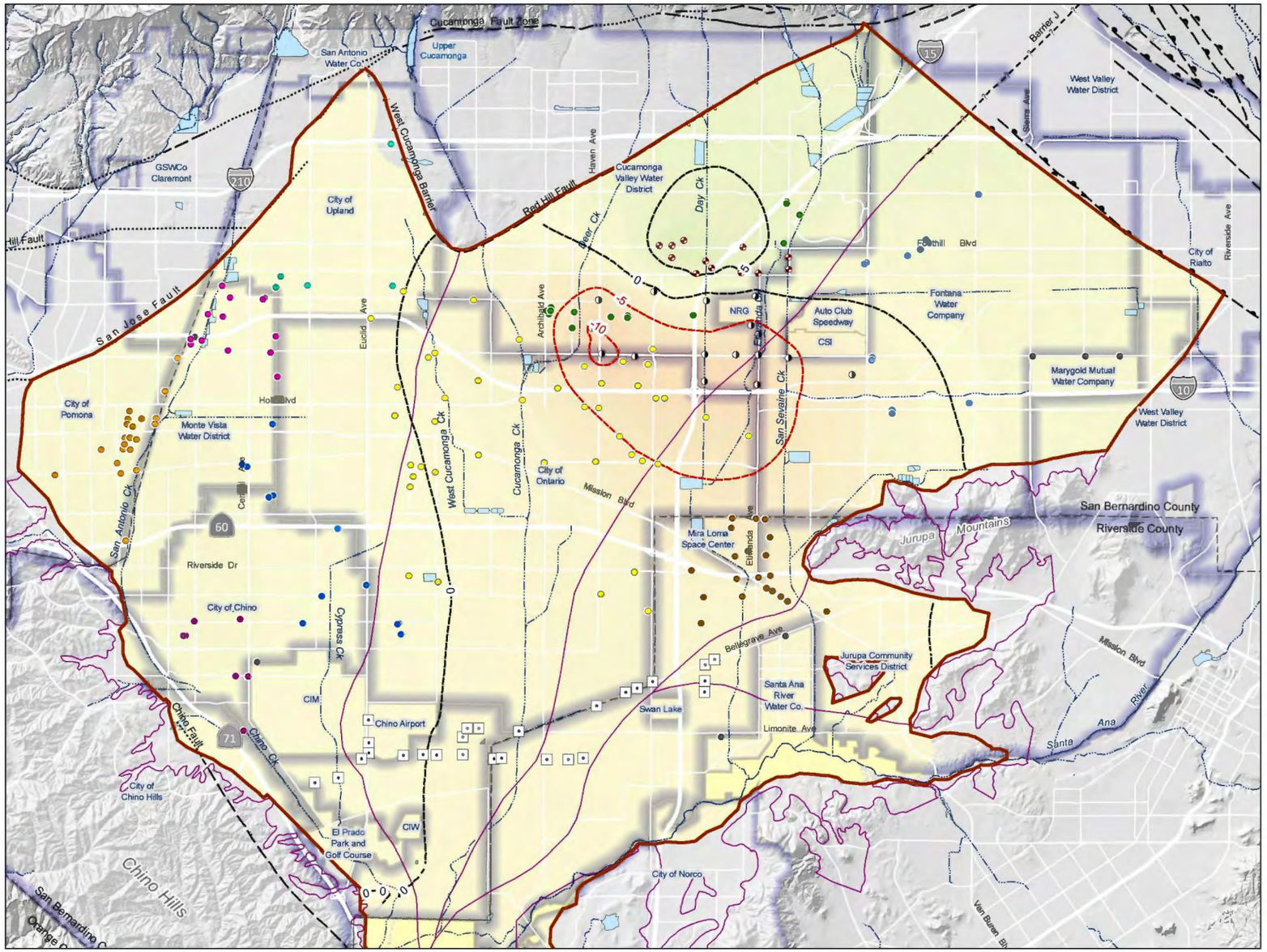
Figure 10

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-17

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 2



Contour of Difference in Groundwater Level (ft)
Positive Difference *Scenario 3 minus Baseline (Jan. 2054)*

Contour of Difference in Groundwater Level (ft)
Negative Difference *Scenario 3 minus Baseline (Jan. 2054)*

Difference in Groundwater Level (ft)
January 2054 - Scenario 3 minus Baseline

50
0
-50

Areas where Scenario will result in higher groundwater levels than the Baseline

Areas where Scenario will result in lower groundwater levels than the Baseline

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

Chino Desalter Wells

Active CBP Injection Well

Active CBP Extraction Well

Streams & Flood Control Channels

Flood Control & Conservation Basins

Water Service Area

Chino Basin Part of the Active CVM MODFLOW Domain

OBMP Management Zones

Prepared by:

WEST YOST

Author: GR
Date: 10/4/2021
File: Fig13 GWLch S3-BL 2054.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Evaluation of the Chino Basin Program

Prepared for:

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Projected Difference in Groundwater Levels for Layer 1
Scenario 3 minus Baseline (January 2054)

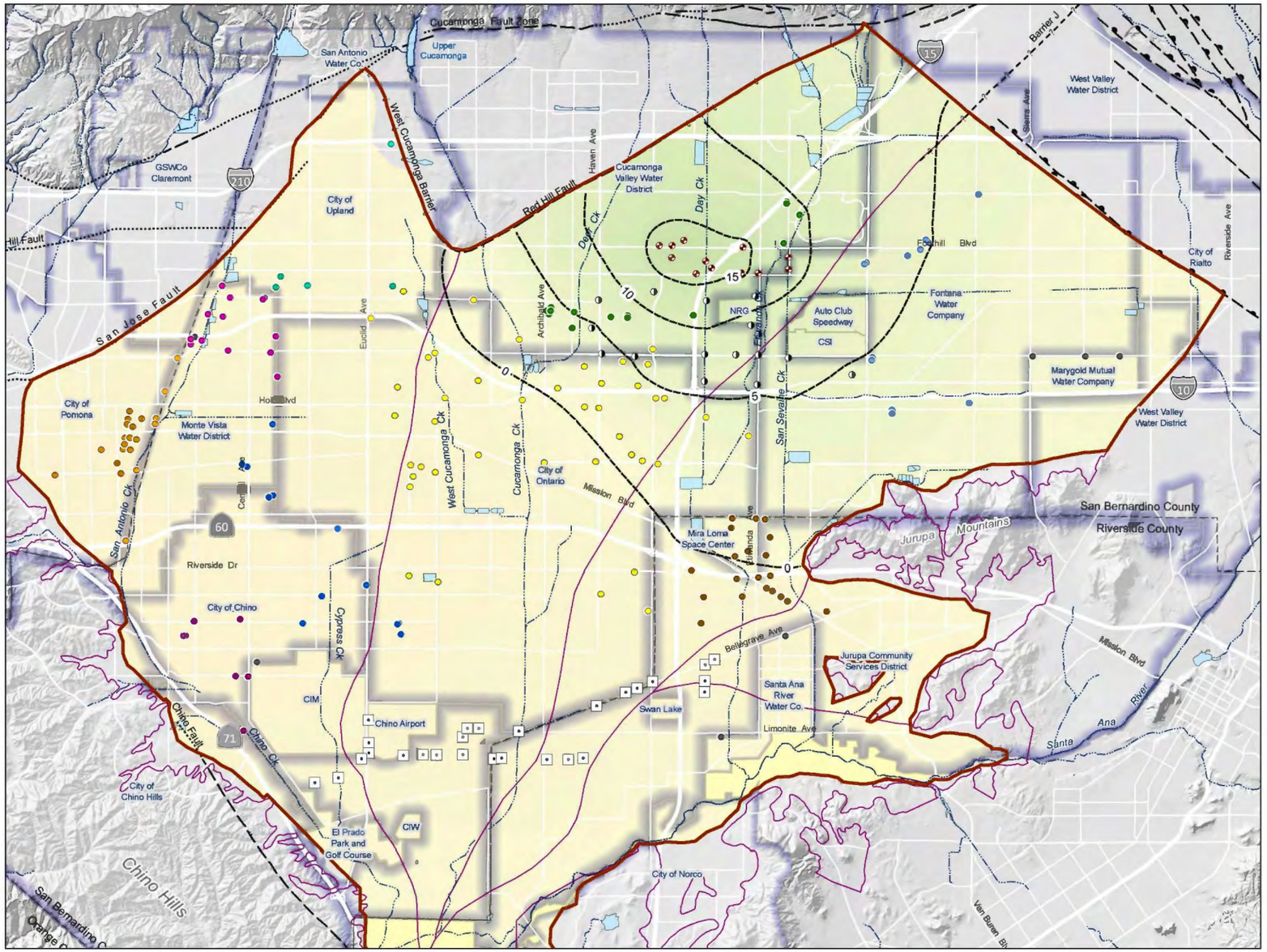
Figure 13

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-18

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 3

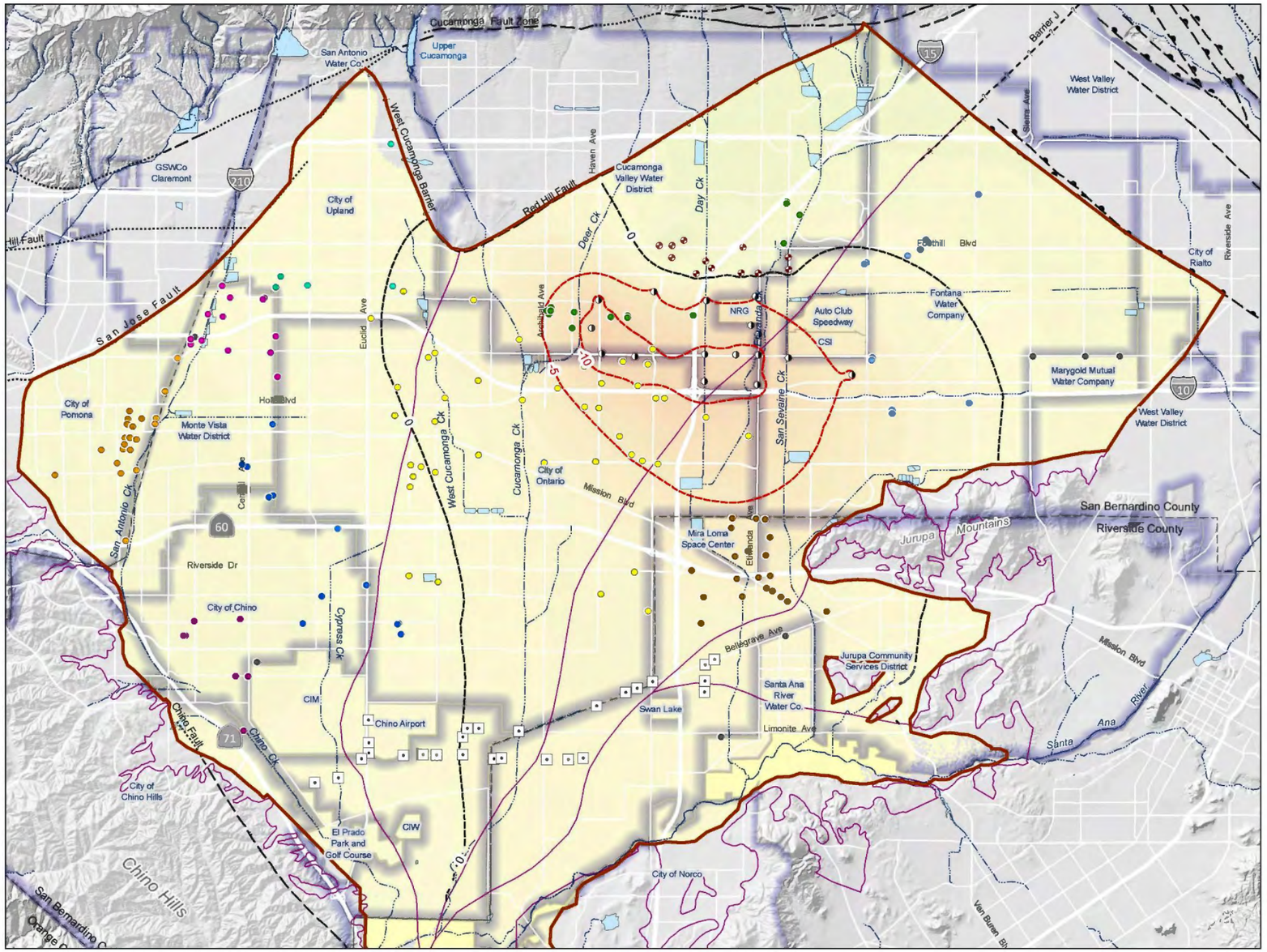


SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-19

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 4



Prepared by: WEST YOST

Author: GR
Date: 10/4/2021
File: Fig19 GWLch S5-BL 2054.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Evaluation of the Chino Basin Program

Prepared for: Inland Empire Utilities Agency, A MUNICIPAL WATER DISTRICT

Projected Difference in Groundwater Levels for Layer 1
Scenario 5 minus Baseline (January 2054)

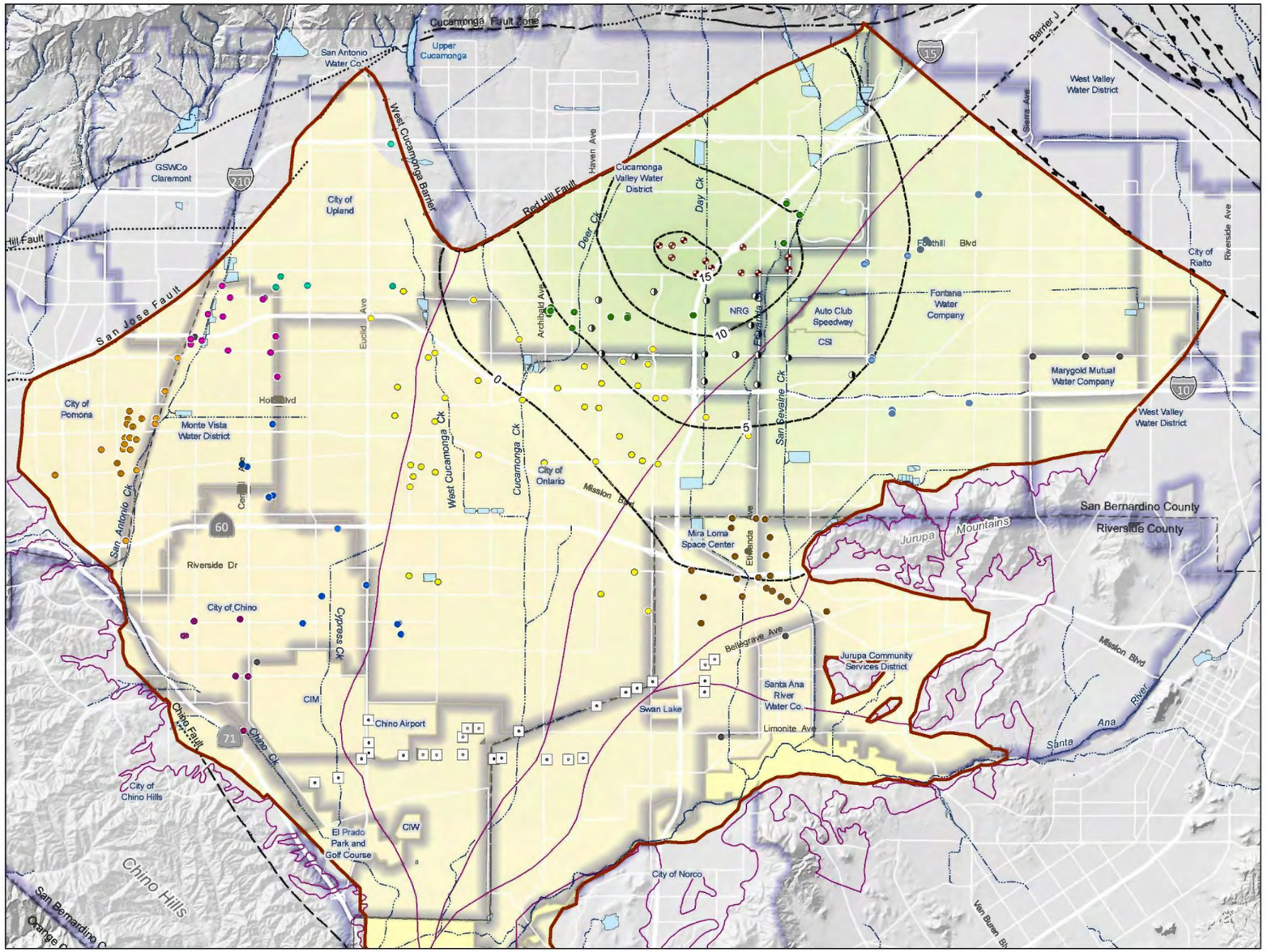
Figure 19

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-20

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 5



Contour of Difference in Groundwater Level (ft)
Positive Difference *Scenario 6 minus Baseline (Jan. 2054)*

Contour of Difference in Groundwater Level (ft)
Negative Difference *Scenario 6 minus Baseline (Jan. 2054)*

Difference in Groundwater Level (ft)
January 2054 - Scenario 6 minus Baseline

50
0
-50

Areas where Scenario will result in higher groundwater levels than the Baseline

Areas where Scenario will result in lower groundwater levels than the Baseline

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

Chino Desalter Wells

Active CBP Injection Well

Active CBP Extraction Well

Streams & Flood Control Channels

Flood Control & Conservation Basins

Water Service Area

Chino Basin Part of the Active CVM MODFLOW Domain

OBMP Management Zones

Prepared by:
WEST YOST

Author: GR
Date: 10/4/2021
File: Fig22 GWLch S6-BL 2054.mxd

0 1 2 3 4 5 Miles
0 2 4 6 8 Km

Evaluation of the Chino Basin Program

Prepared for:
Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Projected Difference in Groundwater Levels for Layer 1
Scenario 6 minus Baseline (January 2054)

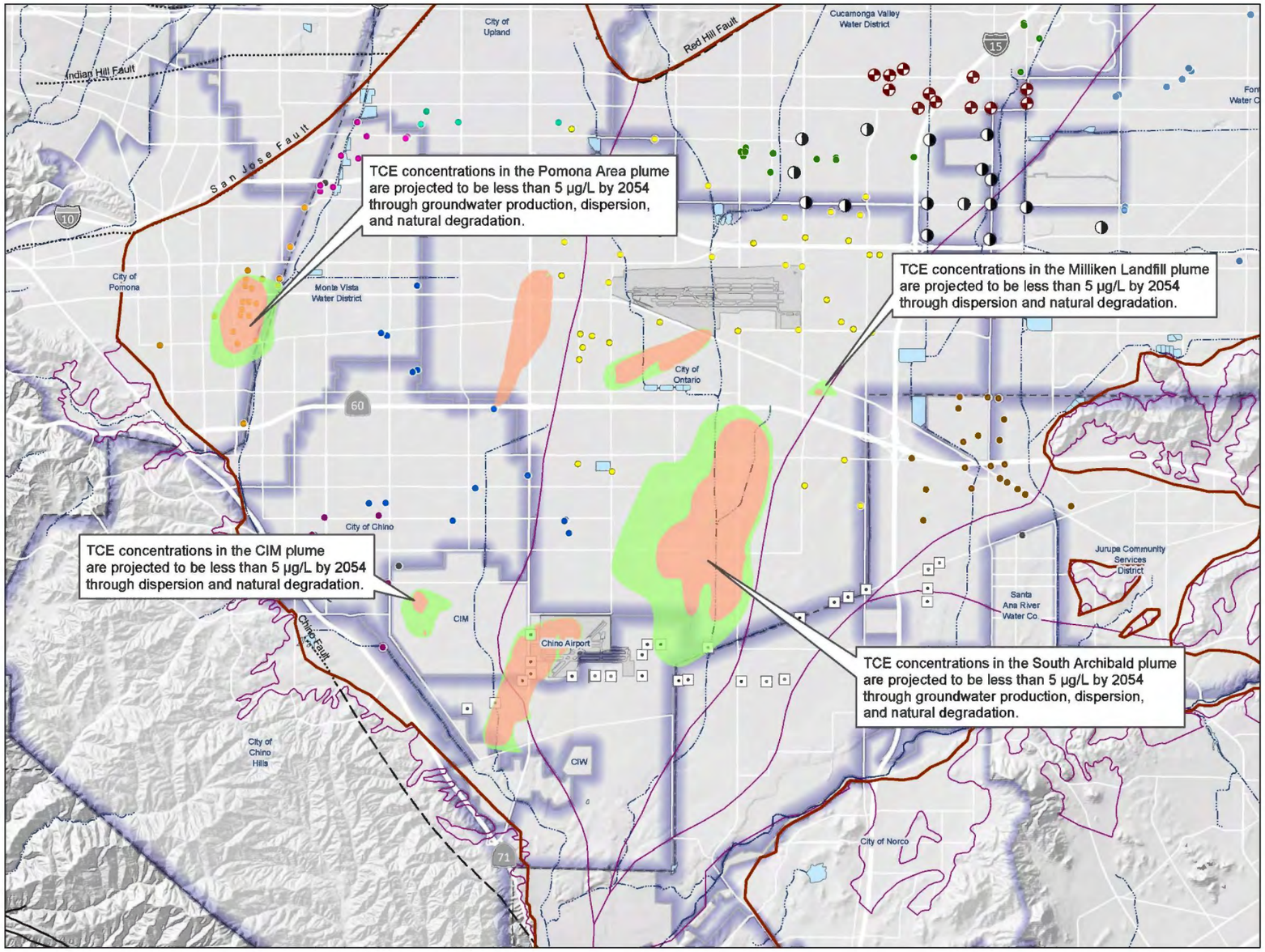
Figure 22

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-21

Tom Dodson & Associates
Environmental Consultants

Projected Difference in Groundwater Levels for Layer 1 – Scenario 6



Estimated Initial TCE Concentration (µg/L)

- 0.01 to 5
- > 5

Projected Boundary of TCE Plume in January 2054

- Baseline (TCE > 5 µg/L)
- Scenario 1 (TCE > 5 µg/L)
- Scenario 2 (TCE > 5 µg/L)

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

- Active CBP Injection Well
- Active CBP Extraction Well
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- Water Service Area
- Chino Basin Part of the Active CVM MODFLOW Domain
- OBMP Management Zones

Prepared by:

WEST YOST

Author: LS
Date: 10/4/2021
File: Figure 25 WQ_Anomalies_2054.mxd

0 1 2 3 Miles
0 1 2 3 4 Km

Evaluation of the Chino Basin Program

Prepared for:

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios
Scenarios 1 and 2 - January 2054

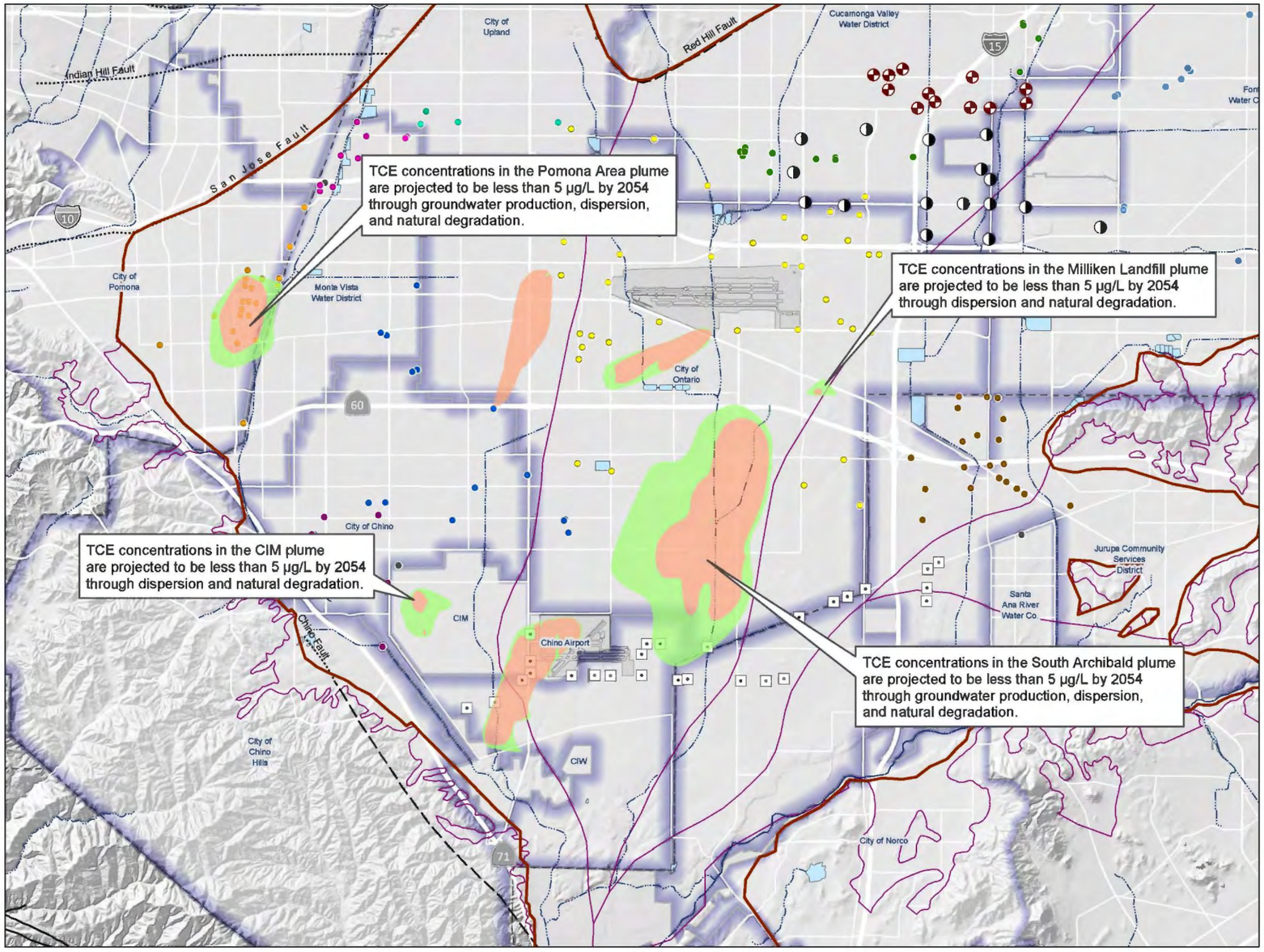
Figure 25

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-22

Tom Dodson & Associates
Environmental Consultants

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios 1 & 2



Estimated Initial TCE Concentration (µg/L)

- 0.01 to 5
- > 5

Projected Boundary of TCE Plume in January 2054

- Baseline (TCE > 5 µg/L)
- Scenario 3 (TCE > 5 µg/L)
- Scenario 4 (TCE > 5 µg/L)

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

- Active CBP Injection Well
- Active CBP Extraction Well
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- Water Service Area
- Chino Basin Part of the Active CVM MODFLOW Domain
- OBMP Management Zones

Prepared by: WEST YOST

Author: LS
Date: 10/4/2021
File: Figure 26 WQ_Anomalies_2054.mxd

0 1 2 3 Miles
0 1 2 3 4 Km

Evaluation of the Chino Basin Program

Prepared for: Inland Empire Utilities Agency, A MUNICIPAL WATER DISTRICT

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios
Scenarios 3 and 4 - January 2054

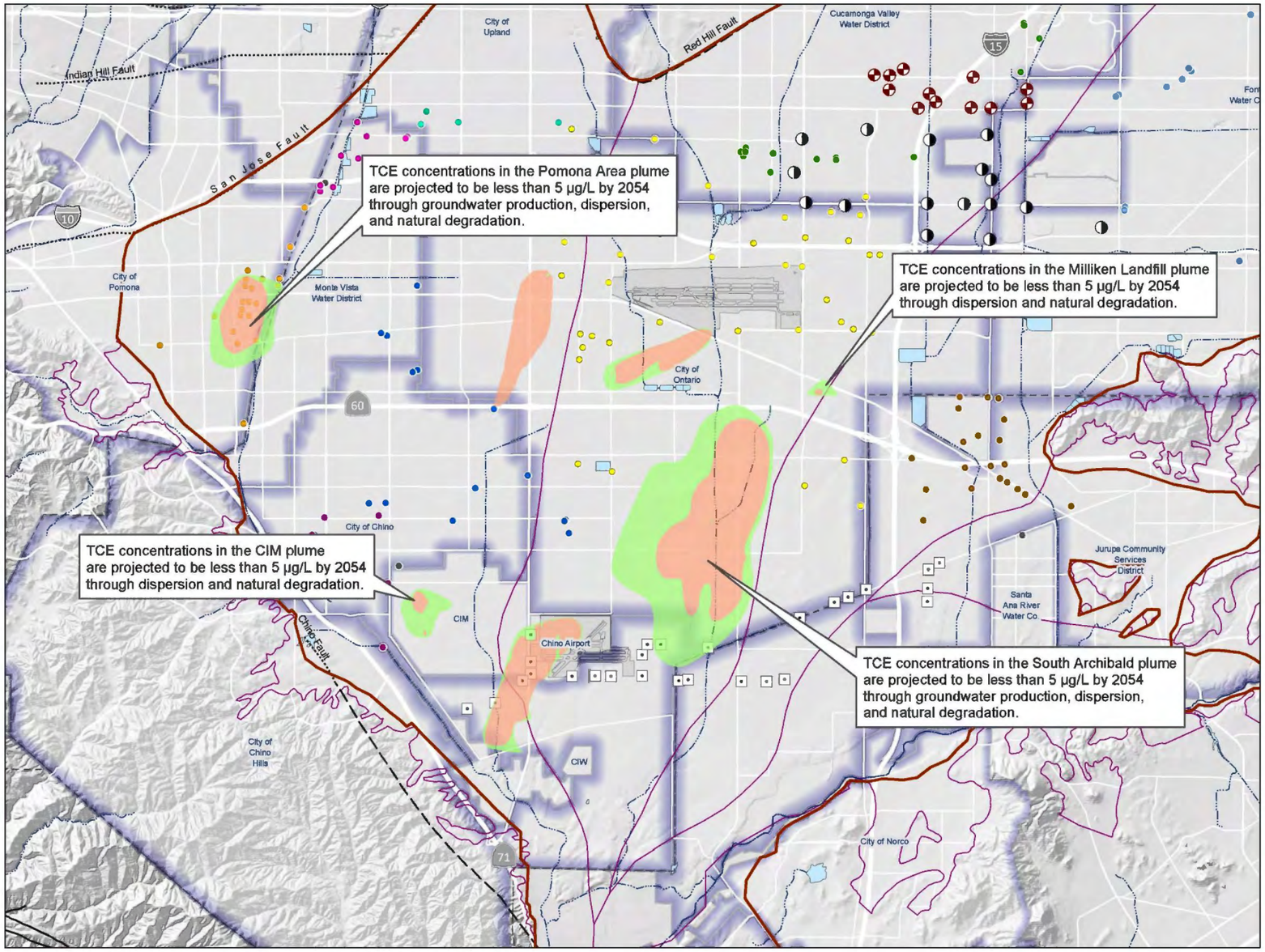
Figure 26

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-23

Tom Dodson & Associates
Environmental Consultants

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios 3 & 4



Estimated Initial TCE Concentration (µg/L)

- 0.01 to 5
- > 5

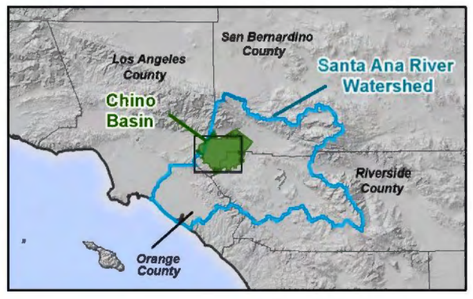
Projected Boundary of TCE Plume in January 2054

- Baseline (TCE > 5 µg/L)
- Scenario 5 (TCE > 5 µg/L)
- Scenario 6 (TCE > 5 µg/L)

Appropriative Pool Pumping Wells

- City of Chino
- City of Chino Hills
- City of Ontario
- City of Pomona
- City of Upland
- Cucamonga Valley Water District
- Fontana Water Company
- Jurupa Community Services District
- Monte Vista Water District
- Other Appropriators

- Active CBP Injection Well
- Active CBP Extraction Well
- Chino Desalter Wells
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- Water Service Area
- Chino Basin Part of the Active CVM MODFLOW Domain
- OBMP Management Zones



Prepared by: WEST YOST

Author: LS
Date: 10/4/2021
File: Figure 27 WQ_Anomalies_2054.mxd

0 1 2 3 Miles
0 1 2 3 4 Km

Evaluation of the Chino Basin Program

Prepared for: Inland Empire Utilities Agency, A MUNICIPAL WATER DISTRICT

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios
Scenarios 5 and 6 - January 2054

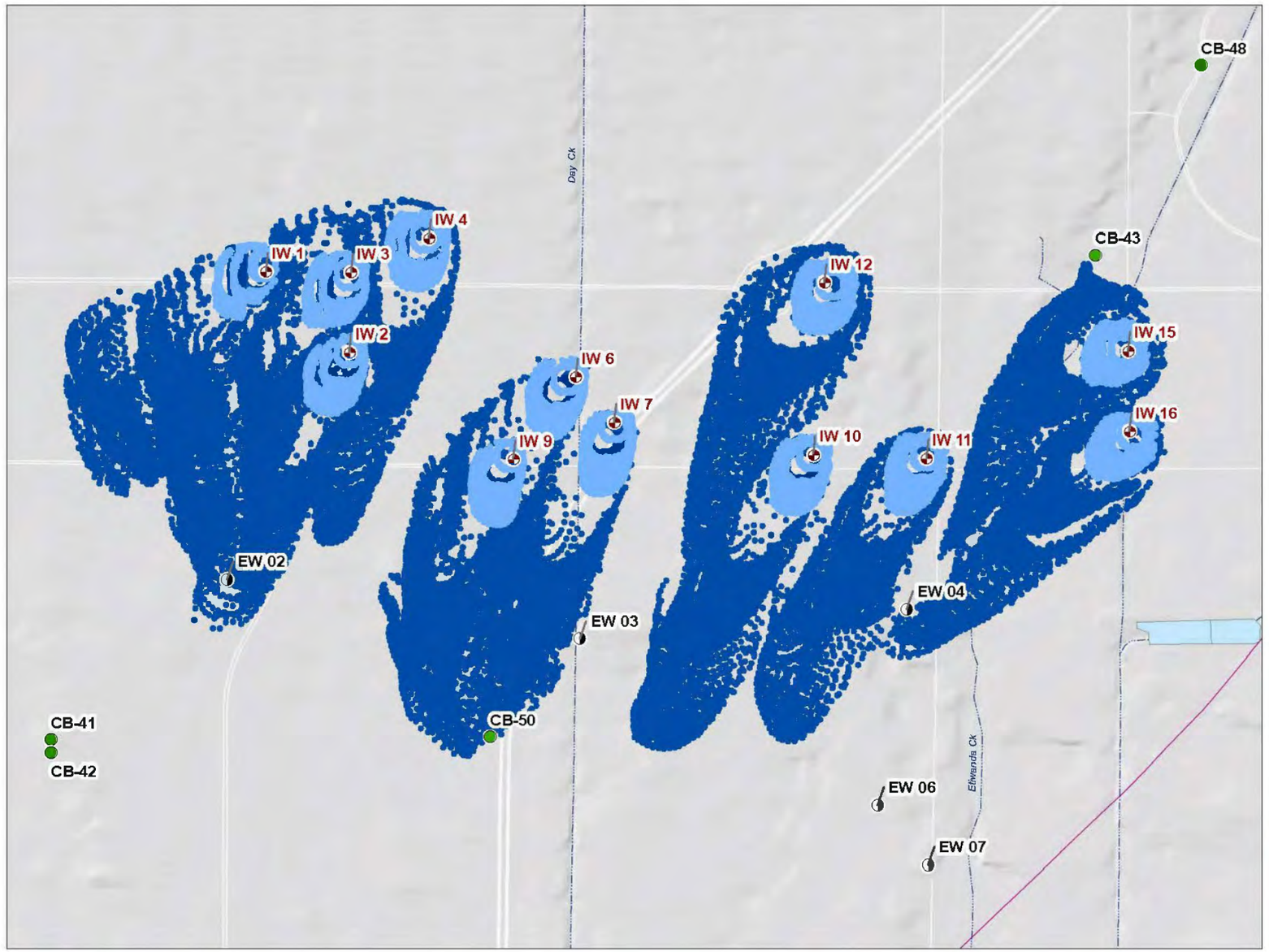
Figure 27

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-24

Tom Dodson & Associates
Environmental Consultants

Estimated Location of Water Quality Anomalies, Baseline and CBP Scenarios 5 & 6



Locations of Injected Particles

- 6 Months after Release
- 2 Years after Release

- Active CBP Injection Well
- Active CBP Extraction Well
- Cucamonga Valley Water District Well
- Streams & Flood Control Channels
- Flood Control & Conservation Basins
- OBMP Management Zones

Prepared by: WEST YOST

Author: GR
Date: 10/15/2021
File: Fig_28 Particles.mxd

0 0.25 0.5 Miles
0 0.5 1 Km

Evaluation of the Chino Basin Program

Prepared for: Inland Empire Utilities Agency, A MUNICIPAL WATER DISTRICT

Locations of Injected Particles
6 Months and 2 Years after
Continuous Quarterly Releases
Scenario 1

Figure 28

SOURCE: Prepared by West Yost for IEUA CBP

FIGURE 4.11-25

Tom Dodson & Associates
Environmental Consultants

Location of Injected Particles 6 Months and 2 Years After Continuous Quarterly Releases

4.12 LAND USE AND PLANNING

4.12.1 Introduction

This section assesses potential impacts related to land use and planning from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Land Use and Planning
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- City of Chino. 2010. General Plan 2025, Land Use Element. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%204%20Land%20Use%20GP%20Update%202013.pdf (accessed 9/29/21)
- City of Chino Hills. 2015 General Plan, Land Use Element. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 9/29/21)
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- City of Fontana. 2018. General Plan, Land Use, Zoning, and Urban Design Element. https://www.fontana.org/DocumentCenter/View/26754/Chapter-15---Land-Use-Zoning-and-Urban-Design (accessed 9/29/21)
- City of Fontana. 2021. About the City of Fontana. https://www.fontana.org/31/About-Us (accessed 9/29/21)
- City of Jurupa Valley. 2017. 2017 General Plan, Land Use Element. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 9/29/21)
- City of Montclair. 1999. General Plan. file:///C:/Users/nwest/Downloads/City%20of%20Montclair%20General%20Plan%20(3).pdf (accessed 9/29/21)
- City of Montclair. 2021. About Montclair, CA. https://www.cityofmontclair.org/about/ (accessed 9/29/21)
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- City of Pomona. 2014. Pomona General Plan, Land Use & Density. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 9/2921)
- City of Rancho Cucamonga. 2010. General Plan. https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf (accessed 9/29/21)

- City of Rialto. 2010. General Plan Environmental Impact Report. https://www.cityofrc.us/sites/default/files/2021-04/Draft%20General%20Plan%20EIR.pdf (accessed 9/29/21)
- City of Rialto. 2010. General Plan. https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan (accessed 9/29/21)
- City of Upland. 2015. Final Program Environmental Impact Report, General Plan Update, Zoning Code Update, Climate Action Plan, and Cable Airport Land Use Compatibility Plan Update. https://www.uplandca.gov/uploads/files/DevelopmentServices/Environmental%20Review%20Documents/FINAL%20GENERAL%20PLAN%20EIR%20with%20comments%20COMBINED.pdf (accessed 9/29/21)
- City of Upland. 2015. General Plan. https://www.uplandca.gov/uploads/ftp/City_departments/development_services/planning/general_plan_map/pdfs/00_Introduction.pdf (accessed 9/29/21)
- County of San Bernardino. 2019. San Bernardino Countywide Plan for County of San Bernardino, Draft Environmental Impact Report. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-10-LU.pdf (accessed 9/29/21)
- County of Riverside. 2021. County of Riverside General Plan, Land Use Element. June. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf (accessed 9/29/21)

No comments pertaining to land use and planning were received at the Scoping Meeting held on behalf of the project. One comment letter specific to this topic was received in response to the Notice of Preparation.

Comment Letter #3 from the San Bernardino County Department of Public Works (dated 10/12/21) states:

- *This letter advises that the project may alter existing or future storm drains and as such is subject to the District Comprehensive Storm Drain Plans (CSDP) and Master Plans of Drainage (MPD): CSDP 1: Rancho Cucamonga, Chino Airport Master Storm Drain Plan (MSDP), Chino Hills MPD, Chino Hills Area MPD, and W. Cucamonga MPD, CSDP 2: Upland MPD, Ontario MPD, Montclair MPD, Fontana MPD, and Chino MPD.*
- *Any encroachments on the District's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the San Bernardino County Flood Control District (SBCFCD) prior to start of construction. The necessity for permits, and any impacts associated with them, should be addressed in the Project environmental documents prior to adoption and certification.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

4.12.2 Environmental Setting: Land Use and Planning

The CBP study area includes the following incorporated cities: Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, Rialto and Upland as well as limited areas of unincorporated Riverside and San Bernardino Counties.

County of San Bernardino

The San Bernardino County Countywide Plan establishes 11 land use designations within 42,095 acres of the Valley Region. Nearly one-third, or 12,695 acres, of the Valley Region's 42,095 acres

of unincorporated acreage is devoted to residential uses. Land use designations within the Valley Region of the General Plan are provided in **Table 4.12-1**.

San Bernardino County is the largest county in the contiguous United States. Only 4 percent of the land in the county is in incorporated jurisdictions and 96 percent of the land area is unincorporated. However, of the unincorporated areas, most (87 percent) is under federal, State, or tribal jurisdiction and outside of the county's administrative control.[1] While the county influences a certain degree of development activity within the 24 cities within the county (primarily administrative buildings, criminal justice facilities, and certain limited infrastructure, including county-maintained roads and flood control facilities), the city councils of these cities directly regulate land use and planning therein.

Table 4.12-1
UNINCORPORATED COUNTY OF SAN BERNARDINO LAND USE DESIGNATIONS IN THE VALLEY REGION PLANNING AREA

Land Use Designation	Acres
Resource & Land Management	1,626
Open Space	3,434
Rural Living	8,055
Very Low Density Residential	4,873
Low Density Residential	6,460
Medium Density Residential	1,362
Commercial	1,497
Commercial Industrial	1,246
Regional Industrial	2,999
Public Facilities	3,790
Special Development	6,702
TOTAL	42,095

SOURCE: County of San Bernardino. 2019. San Bernardino Countywide Plan for County of San Bernardino, Draft Environmental Impact Report. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-10-LU.pdf (accessed 9/29/21)

County of Riverside

Compared to eastern Riverside County, the western portion of the county contains the greatest concentration of population and has experienced the greatest growth pressures. The majority of this population is concentrated in the incorporated cities of Corona, Riverside, Beaumont, Banning, Norco, Lake Elsinore, Perris, Hemet, San Jacinto, Moreno Valley, Calimesa, Canyon Lake, Murrieta, and Temecula.

The county's General Plan land use designations consist of five broad foundation component land uses: Agriculture, Rural, Rural Community, Open Space, and Community Development. Each of these is subdivided into more detailed land use designations at the area plan level. **Table 4.12-2** presents an itemized acreage summary for each General Plan Foundation Component. As shown on **Table 4.12-2**, the Rural, Agricultural, Rural Community, and Open Space General Plan

[1] County of San Bernardino. 2019. San Bernardino Countywide Plan for County of San Bernardino, Draft Environmental Impact Report. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-10-LU.pdf (accessed 9/29/21)

Foundation Component-designated lands account for 93 percent of the entire unincorporated area, with the remaining 7 percent devoted to urbanized uses, roadways, and Indian lands. Approximately 84 percent of the area in western Riverside County is designated for Agricultural, Rural, Rural Community, or Open Space uses, while these uses make up over 96 percent of the land in the eastern half of the county.[2]

Table 4.12-2
UNINCORPORATED RIVERSIDE COUNTY LAND USE DESIGNATIONS

Land Use Designation	Western County Area Plans Acreage	Total County Acreage
Agriculture	28,552	184,835
Rural	251,559	291,390
Rural Community	64,065	68,144
Open Space	659,418	3,288,199
Community Development	103,725	164,154
Other	79,087	109,540
TOTAL[1]	**1,186,406**	**4,107,262**

SOURCE: County of Riverside. 2021. County of Riverside General Plan, Land Use Element. June. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf (accessed 9/29/21)
[1] Includes Indian Lands and Major Roadways. Does not include Cities and March Joint Powers Authority within Riverside County

City of Chino

In the late 19th century, the City of Chino started as an agricultural community. Beginning in the 1980s, the land use focus in the city largely shifted away from agriculture towards industrial and warehouse/distribution uses. Industrial and warehouse uses are most common in the southern portions of the city and along major trucking routes and near rail lines and the Ontario Airport. The city's primary commercial areas are located along major transportation routes, including SR-71, Central Avenue, Riverside Drive, and Philadelphia Street. The land use designations within the city are summarized in **Table 4.12-3**. [3]

Table 4.12-3
CITY OF CHINO LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	4,700
Open Space (including Agriculture)	6,134
Commercial	849
Industrial	3,014
Other (including Public, Public Schools, Mixed Use, Airport-Related, and Community Core)	1,983
TOTAL	**16,680**

SOURCE: City of Chino. 2010. General Plan 2025, Land Use Element. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%204%20Land%20Use%20GP%20Update%202013.pdf (accessed 9/29/21)

[2] County of Riverside. 2021. County of Riverside General Plan, Land Use Element. June. https://planning.rctlma.org/Portals/14/genplan/2021/Ch03_Land%20Use_06.29.21.pdf (accessed 9/29/21)
[3] City of Chino. 2010. General Plan 2025, Land Use Element. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%204%20Land%20Use%20GP%20Update%202013.pdf (accessed 9/29/21)

City of Chino Hills

The City of Chino Hills is known for its rural atmosphere and its 3,000 acres of open space, 44 parks, 48 miles of recreational trails, and community buildings. [4] Historically, the city's primary land use was open space with some scattered rural residential ranches. Much of the natural habitat of the area is preserved within the City of Chino Hills State Park, which is now the largest State Park in California located amongst an urban setting. In the late 1970s, development pressures gradually started moving to the city. Residential development and communities were clustered and concentrated to protect as much open space as possible and most commercial development was placed along the SR-71 corridor.[5]

According to the Land Use Element of the City of Chino Hills General Plan, much of the land in the city designated for development has been built. The majority of vacant land that remains consists of hillside properties and natural resource areas. Future development of residential uses will depend on regional transit links along major arterials. Land use designations are identified in the Chino Hills General Plan and included below in **Table 4.12-4**.[6]

Table 4.12-4
CITY OF CHINO HILLS LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	12,536
Commercial	1,403
Open Space	12,181
Institutional/Public Facility	633
Mixed Use	46
TOTAL	**26,799**[a]

[a] The City's total area, including properties with Land Use Designations and right-of-way, is 28,736 acres (or approximately 45 square miles). Public and private streets and SR-71 are not provided with a Land Use Designation and are not included within the total acreages. In addition, public and private rights-of-way occupy an additional 1,937 acres within the City's boundaries that are also not included in the total acreage.
SOURCE: City of Chino Hills. 2015 General Plan, Land Use Element. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 9/29/21)

City of Eastvale

A decade ago, the Eastvale area existed as part of the larger Chino Dairy area, a world-famous concentration of dairies that at its height contained some 400 dairies and thousands of dairy cows. The City of Eastvale, located in Riverside County, is part of the small portion of the former dairy area that was outside San Bernardino County and therefore not subject to the long-term protection offered by the San Bernardino County Agricultural Preserve. The County of Riverside facilitated development of Eastvale with the adoption of the Eastvale Area Plan in 2003. A part of the Riverside County General Plan, the Eastvale Area Plan established the plan for land uses that is basically reflected in the development in place today. Existing (2011) land uses in the Planning

[4] City of Chino Hills. 2021. A Great Place to Be! https://www.chinohills.org/93/A-Great-Place-To-Be (accessed 9/29/21).
[5] City of Chino Hills. 2021. History. https://www.chinohills.org/95/History (accessed 9/29/21).
[6] City of Chino Hills. 2015 General Plan, Land Use Element. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed 9/29/21)

Area are summarized in **Table 4.12-5**, which addresses existing land uses by percentage of area within the city. [7]

Table 4.12-5
CITY OF EASTVALE LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential (8-14 dwelling units [du]/acre)	5%
Residential (5-8 du/acre)	3%
Residential (2-5 du/acre)	50%
Residential (0.5-acre minimum lot)	4%
Conservation	10%
Open Space Recreation	4%
Agriculture	1%
Water	4%
Light Industrial	8%
Business Park	5%
Commercial Retail	3%
Public Facilities	1%
Freeway	2%
SOURCE: City of Eastvale. 2012. General Plan, Land Use Element. https://www.eastvaleca.gov/home/showpublisheddocument/2360/635767198266670000 (accessed 9/29/21)	

City of Fontana

Fontana was a rural and diversified farming community in the early 1900s and throughout the century shifted into a population-dense manufacturing center. The city is known by its early steel mill operations during World War II and was the region's leading producer of steel and steel-related products. The city's suburban location near I-10, I-15, and I-210, along with major rail transportation corridors, allows for a commuting option for citizens of surrounding areas.[8,9]

Fontana is now a major Inland Empire hub of warehousing and distribution centers. Industrial and trucking-based land uses prosper and the city also contains a large number of retailers and small businesses. Warehouses, distribution centers, and heavy industrial uses are concentrated in the city's southern half adjacent to the I-10 corridor. [8,9]

Along with the commuter population, a range of residential land uses have developed within the city. Single- and multi-family neighborhoods are located primarily within the center of the city along with commercial land uses. Newer residential units are being developed along the northern edge of the city and a large portion of the land is undeveloped as a mix of planned communities and job centers. [8,9]

Land use designations are identified in the Fontana General Plan and included below in **Table 4.12-6**.

[7] City of Eastvale. 2012. General Plan, Land Use Element. https://www.eastvaleca.gov/home/showpublisheddocument/2360/635767198266670000 (accessed 9/29/21)
[8] City of Fontana. 2018. General Plan. https://www.fontana.org/DocumentCenter/View/26754/Chapter-15---Land-Use-Zoning-and-Urban-Design (accessed 9/29/21)
[9] City of Fontana. 2021. About the City of Fontana. https://www.fontana.org/31/About-Us (accessed 9/29/21)

Table 4.12-6
CITY OF FONTANA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	15,474
Commercial	1,170
Mixed Use	2,564
Industrial	8,526
Public	3,328
Transportation/Utility Right-of-Way	1,912
Open Space	1,599
TOTAL	**33,454**

SOURCE: City of Fontana. 2018. General Plan, Land Use, Zoning, and Urban Design Element. https://www.fontana.org/DocumentCenter/View/26754/Chapter-15---Land-Use-Zoning-and-Urban-Design (accessed 9/29/21)

City of Jurupa Valley

In 2017, Jurupa Valley experienced significant residential and industrial growth. The city currently has a mix of medium- and low-density residential development, equestrian and agricultural activities, and a mix of retail commercial, office, and industrial uses. In particular, the city is experiencing substantial development interest for more industrial warehousing, and the Inland Empire's booming transportation/logistics industry has resulted in industrial and warehouse uses encroaching into historically residential and rural neighborhoods. This trend may have limited opportunities for development in the retail commercial, office, and job-rich manufacturing sectors.[10]

Table 4.12-7 below shows the city's General Plan land uses, which are organized around 23 land use designations and 11 land use overlays.

Table 4.12-7
CITY OF JURUPA VALLEY LAND USE DESIGNATIONS

Land Use Designations	Acres
Rural Residential	103.6
Estate Residential	338.5
Very Low Density Residential	97.4
Low Density Residential	7,062.2
Medium Density Residential	3,901.1
Medium-High Density Residential	793.0
High Density Residential	292.9
Very High Density Residential	88.8
Highest Density Residential	212.0
Commercial Retail	1,105.7
Commercial Tourist	122.6
Commercial Neighborhood	43.3

[10] City of Jurupa Valley. 2017. 2017 General Plan, Land Use Element. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 9/29/21)

Land Use Designations	Acres
Commercial Office	14.9
Business Park	673.8
Business Park Specific Plan	514.4
Light Industrial	3,076.8
Heavy Industrial	736.9
Open Space-Recreation	1,452.2
Open Space-Rural	1,131.6
Open Space-Conservation	683.5
Open Space-Conservation Habitat	971.1
Open Space-Mineral Resources	300.7
Open Space-Water	884.1
Railroad	168.5
Roadways/other	2,549.7
Public Facility/Institutional	527.0
TOTAL	27,846.3

SOURCE: City of Jurupa Valley. 2017. 2017 General Plan, Land Use Element. https://www.jurupavalley.org/DocumentCenter/View/217/2017-Master-General-Plan-PDF (accessed 9/29/21)

City of Montclair

Montclair was once a greenbelt of citrus groves located between the agricultural communities of Pomona and Ontario. Currently, Montclair is primarily made up of residential land uses, intermixed with commercial development around Montclair Plaza, the Entertainment Plaza, and auto dealerships. The city contains very little open space and agriculture.[11]

The city is well known for its close proximity to private universities and colleges, including the Claremont Colleges, California State Universities, and several community colleges. These educational institutions made the area a prime location for residential development. Additionally, the city is near I-10, which allows for commuter access from Los Angeles County and other portions of the Inland Empire.[12] Land use designations are identified in the Montclair General Plan and included below in **Table 4.12-8**.

[11] City of Montclair. 1999. General Plan. file:///C:/Users/nwest/Downloads/City%20of%20Montclair%20General%20Plan%20(3).pdf (accessed 9/29/21)
[12] City of Montclair. 2021. About Montclair, CA. https://www.cityofmontclair.org/about/ (accessed 9/29/21)

Table 4.12-8
CITY OF MONTCLAIR LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	2,064
Senior Housing	20
Office-Professional	20
Commercial	607
Business Park	230
Industrial Park	308
Limited Manufacturing	75
Public/ Quasi-Public	272
Neighborhood Park	49
Conservation Basin	82
Community Plan Area	160
Planned/Development Area	72
Medical Center	20
Freeway & Railroad Right-of-ways	159
TOTAL	4,148
SOURCE: City of Montclair. 1999. General Plan, Land Use Element. file:///C:/Users/nwest/Downloads/City%20of%20Montclair%20General%20Plan%20(3).pdf (accessed 9/29/21)	

City of Ontario

Similar to other cities within the CBP area, Ontario was first developed as an agricultural community, largely but not exclusively devoted to citrus. Since World War II, the city has become much more diversified and now reflects an industrial and manufacturing economy. The city is well provided with major transportation corridors, including railroads and freeways, as well as the Ontario International Airport. The primary land use within the city is residential, closely followed by industrial uses.[13]

The area of the city located northwest of I-10 is an older and more historical area that is characterized by residential and industrial land uses. The airport area northeast of SR-60 contains a large area of hospitality, industrial, warehousing, and distribution uses. The portion of the city south of SR-60 is characterized by residential and planned-residential communities and retail-oriented commercial centers. Land use designations are identified in the city's General Plan and included below in **Table 4.12 -9**.

[13] City of Ontario. 2021. Facts & History. https://www.ontarioca.gov/FactsAndHistory (accessed 9/29/21)

Table 4.12-9
CITY OF ONTARIO LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	10,857
Retail/Service	1,386
Employment	8,067
Mixed Use	1,627
Other (includes open space, public facilities, roadways, etc.)	9,915
Mixed Use	1,627
TOTAL	**31,786**
SOURCE: City of Ontario. 2021. The Ontario Plan: A Framework for the Future. https://www.ontarioplan.org/wp-content/uploads/sites/4/2021/04/LU-03-Future-Buildout-for-PGPA18-003_RM.pdf (accessed 9/29/21)	

City of Pomona

Pomona's land uses are arranged in an overall pattern typical of the city's age, topography, and western United States location. The city's relatively uniform topography with few physical constraints has allowed for a relatively uniform street grid with residential neighborhoods and commercial corridors radiating from the traditional mixed-use Downtown core. Residential neighborhoods located farther from Downtown and along the hillsides to the north and south were built later in the 20th century and are more consistently residential in use. At the western and eastern edges of the city, large industrial areas have developed with access to railway and major roadway arteries. Although Pomona is characterized by a diverse range of land uses, almost half of the city's land area (48 percent) is devoted to public uses, including parks, dedicated open spaces, schools, and community facilities, as well as streets and other rights-of-way. The remaining land containing private development is composed primarily of housing, which accounts for 35 percent of the city's land area. Less predominant in terms of land area are industrial (8 percent), commercial (4 percent) and office (1 percent) uses. Vacant lands comprise 4 percent of the city's land area and are located throughout the city, particularly in the older areas and in the industrial districts.[14] Land use designations in the city are summarized in **Table 4.12-10**, which addresses existing land uses by percentage of area within the city.

Table 4.12-10
CITY OF POMONA LAND USE DESIGNATIONS

Land Use Designation	Percentage of Acreage within the City
Residential	35%
Streets and Other Right-of-Way	24%
Public Lands	24%
Vacant Land	4%
Industrial	8%
Commercial	4%
Professional Office	1%
SOURCE: City of Pomona. 2014. Pomona General Plan, Land Use & Density. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 9/2921)	

[14] City of Pomona. 2014. Pomona General Plan, Land Use & Density. https://www.pomonaca.gov/home/showpublisheddocument/2402/637521057423830000 (accessed 9/2921)

City of Rancho Cucamonga

Rancho Cucamonga is predominantly a residential community that is largely built-out. Commercial centers and industrial land uses are primarily clustered along Foothill Boulevard, Base Line Road, and several other major roadways. The northern edge of the city is dominated by open space and hillside terrain. The residential character of Rancho Cucamonga can be described as primarily low-density and consisting of high-quality, stable neighborhoods. Most residential uses located in the northern areas include large lot, detached homes. Commercial uses vary greatly, from regional shopping centers to smaller neighborhood retail stores. Industrial uses range from heavy industrial such as Tamco Steel and Mission Foods, to warehouses, distribution centers, and light industrial that include business parks and office uses. Most of the industrial uses are located south of Foothill Boulevard, with the heavy industrial uses located on both sides of I-15.[15] Land use designations identified in the city's General Plan are included below in **Table 4.12-11**.

Table 4.12-11
CITY OF RANCHO CUCAMONGA LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	10,435
Commercial	660
Mixed Use	702
Industrial	3,203
Public Facilities	3,104
Schools	536
Parks	347
Open Space and Conservation	1,893
Vacant	5,671
TOTAL	**26,551**

SOURCE: City of Rancho Cucamonga. 2010. General Plan, Land Use. https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf (accessed 9/29/21)

City of Rialto

Rialto's land use pattern is defined by nearly 100 years of historical growth. The historic Downtown and surrounding older neighborhoods, with smaller residential lots and small central business district, provide a walkable urban core. Suburban tract homes from the 1950s and 1960s, located away from Downtown, define much of the city. Newer residential neighborhoods have filled in the northern areas of the city. Commercial uses are focused along Foothill Boulevard (Historic Route 66), Riverside Avenue, Valley Boulevard, and Baseline Road at Riverside Avenue. These corridors and intersections, along with Downtown, constitute the city's major commercial areas. Industrial and warehouse facilities are clustered along rail lines, where access to shipping facilities was important through the mid-1900s, particularly for the citrus industry. Other industrial activities have clustered north of SR-210 and south of I-10. Other industrial areas include land adjacent to the Rialto Airport in the north and near SR-210, and I-10 and the Union Pacific railroad line in the south.[16] Land use designations are included below in **Table 4.12-12**.

[15] City of Rancho Cucamonga. 2010. General Plan, Land Use. https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf (accessed 9/29/21)
[16] City of Rialto. 2010. General Plan. https://www.yourrialto.com/DocumentCenter/View/1494/2010-General-Plan (accessed 9/29/21)

Table 4.12-12
CITY OF RIALTO LAND USE DESIGNATIONS

Land Use Designation	Acres
Residential	11,336
Commercial	941
Mixed Use	863
Industrial	3,775
Open Space	2,409
Public Facilities	1,146
Arterials/Freeways	4,063
TOTAL	**24,533**

SOURCE: City of Rialto. 2010. General Plan Environmental Impact Report. https://www.cityofrc.us/sites/default/files/2021-04/Draft%20General%20Plan%20EIR.pdf (accessed 9/29/21)

City of Upland

Upland was once dominated by citrus groves. It is located at the foot of the San Gabriel Mountains and is known for preserving a small-town character while being a medium-sized city. The city is located directly east of the Los Angeles Metropolitan area and has attracted many commuters due to easy access to I-10 and I-210. The city's economic anchors are the Downtown area, San Antonio Hospital, and Cable Airport. Planning efforts such as revitalizing the city's historic downtown area, protection of historic buildings, and strengthening of local business, support the integrity of the city's character. In recent years, the city developed planning efforts to become more economically diverse by shifting planned land uses from residential development to industrial and commercial uses.[17] Land use designations identified in the city's General Plan are included below in **Table 4.12-13**.

Table 4.12-13
CITY OF UPLAND LAND USE DESIGNATIONS

Land Use Designations	Acres
Residential	6,477
Commercial	216
Industrial	1,042
Mixed Use	560
Special/Institutional	1,868
Specific Plan	802
TOTAL	**10,966**

SOURCE: City of Upland. 2015. Final Program Environmental Impact Report, General Plan Update, Zoning Code Update, Climate Action Plan, and Cable Airport Land Use Compatibility Plan Update. https://www.uplandca.gov/uploads/files/DevelopmentServices/Environmental%20Review%20Documents/FINAL%20GENERAL%20PLAN%20EIR%20with%20comments%20COMBINED.pdf (accessed 9/29/21)

[17] City of Upland. 2015. General Plan. https://www.uplandca.gov/uploads/ftp/City_departments/development_services/planning/general_plan_map/pdfs/00_Introduction.pdf (accessed 9/29/21)

4.12.3 Regulatory Setting

The following regulations are applicable to land use and planning.

4.12.3.1 State

California Government Code Section 53091
California Government Code Section 53091 specifies that water supply facilities such as those associated with the proposed project, are exempt from zoning restrictions. Specifically, Section 53091 states (State of California Legislative Council, 2003):

(d) Building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.
(e) Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water.

Government Code Section 65302
Subdivision (a) of California Government Code Section 65302 requires a Land Use Element to be a component of every city's and county's General Plan. A land use element designates the proposed general distribution and general location and extent of the uses of the land for housing, business, industry, open space, agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, greenways, and other categories of public and private uses of land. The land use elements include the standards of population density and building intensity recommended for the various districts and other territory covered by the general plan.

4.12.3.2 Local

Southern California Association of Governments
The Southern California Association of Governments (SCAG) is the federally mandated Metropolitan Planning Organization representing six Counties: Los Angeles, Imperial, Orange, Riverside, San Bernardino, and Ventura. On September 3, 2020, SCAG adopted its Connect SoCal: The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which is an update to the previous 2016 RTP/SCS. Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide reduction targets and in so doing identifies the amount and location of growth expected to occur within the region.

San Bernardino Associated Governments
San Bernardino Associated Governments (SANBAG) is the council of governments and transportation planning agency for San Bernardino County. SANBAG is responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide. SANBAG serves the 2.18 million residents of San Bernardino County.

As the County Transportation Commission, SANBAG supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, congestion management efforts and long-term planning studies.

Airport Land Use Compatibility Plans

The California State Legislature enacted airport land use planning laws which are intended to:

- Provide for the orderly development of each public use airport in California and the area surrounding these airports so as to promote the overall goals and objectives of the California airport noise standards adopted pursuant to California Public Utilities Code Section 21669 and to prevent the creation of new noise and safety problems; and
- Protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses.

The general mechanism that the statutes provided for compliance with the airport planning laws is for counties to establish an airport land use compatibility plan (ALUCP). The purpose of an ALUCP is to effectively identify areas, located outside the airport proper, which would be influenced by the future operations of the airport. Planning boundaries are established on the perimeters of these areas, which are plotted by applying the specific operational criteria of the airport to various planning models that have been primarily developed by the Federal Aviation Administration. The two public airports within the Chino Basin area include Chino Airport and the Ontario International Airport.

General Plan

The general plan of each local jurisdiction within the Chino Basin Area includes a land use element. As required by State law, each land use element designates the proposed general distribution and general location and extent of the uses of the land and the standards of population density and building intensity for each land use designation.

4.12.4 Thresholds of Significance

According to Appendix G, Section XI, of the CEQA Guidelines, a project would have a significant effect on mineral resources if the project would:

a) Physically divide an established community; or
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.12.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP related to land use and planning.

a) Would the project physically divide an established community?

The project does not propose any action that could physically divide an established community. The physical division of an established community generally refers to the construction of features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The exact locations of the proposed wells have not yet been determined; however, there are no features of these wells that would create a barrier or physically divide an established community, particularly given the small area (a half acre or less) required to implement the facilities proposed as part of this Project Category. No impacts are anticipated.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Proposed conveyance system pipelines and ancillary facilities are anticipated to be constructed primarily within existing public rights-of-way. Once linear pipelines are constructed, some ancillary facilities could be located aboveground within close proximity to the public rights-of-way. The exact locations of the ancillary facilities have not yet been determined; however, there are no features of these ancillary facilities, such as pump stations and reservoir tanks, that would create a barrier or physically divide an established community, particularly given that in many communities, ancillary facilities such as steel or concrete reservoirs are integrated into the landscape unobtrusively. As such, no impacts are anticipated.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed increase in safe storage capacity would have no potential to divide an established community.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The development of the AWPF at RP-4 would occur within developed sites already containing wastewater treatment facilities. There are no features of the treatment facility upgrades that would create a barrier or physically divide an established community. Aboveground facilities would be integrated into the existing urban/industrial character surrounding a treatment plant. As such, there would be no impact.

The exact locations of the proposed wellhead treatment facilities have not yet been determined; however, there are no features of these treatment facilities that would create a barrier or physically divide an established community. No impacts are anticipated.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The Policy Plan of the San Bernardino Countywide Plan states that:

The ability to live and prosper in the diverse physical setting of San Bernardino County is dependent on the effective provision and management of water, wastewater, stormwater, solid waste, power, and communication systems. The effective management of these systems helps fulfill the County's obligation to protect the lives and property of residents and businesses, while also protecting the natural environment from the impacts of human development.

Furthermore, the Policy Plan states the following principles:

- Reliable and cost-effective water, stormwater, wastewater, sanitary, power, and communications systems are critical for maintaining and improving our communities, institutions, and businesses.
- Groundwater recharge, water conservation, water reclamation, and supplemental water are key components of a resilient water supply strategy. The effective management of water resources can reduce carbon emissions, energy consumption, and utility costs.
- Collaborative efforts between government agencies and other stakeholders are necessary in order to effectively plan and efficiently provide infrastructure.

The Policy Plan also include the following goals and policies that are applicable to the proposed project:

Goal IU-1: Water Supply. Water supply and infrastructure are sufficient for the needs of residents and businesses and resilient to drought.

> ***Policy IU-1.3:*** Recycled water. We promote the use of recycled water for landscaping, groundwater recharge, direct potable reuse, and other applicable uses in order to supplement groundwater supplies.
>
> ***Policy IU-1.8:*** Groundwater management coordination. We collaborate with Watermaster's, groundwater sustainability agencies, water purveyors, and other government agencies to ensure groundwater basins are being sustainably managed. We discourage new development when it would create or aggravate groundwater overdraft conditions, land subsidence, or other "undesirable results" as defined in the California Water Code. We require safe yields for groundwater sources covered by the Desert Groundwater Management Ordinance.

Policy IU-1.10: Connected systems. We encourage local water distribution systems to interconnect with regional and other local systems, where feasible, to assist in the transfer of water resources during droughts and emergencies.

Policy IU-1.11: Water storage and conveyance. We assist in development of additional water storage and conveyance facilities to create a resilient regional water supply system, when it is cost effective for County-owned water and stormwater systems.

The statements and policies outlined above are echoed throughout the General Plans that pertain to the area within which the Chino Basin is located. Therefore, the General Plans that pertain to the area within which the Chino Basin is located support the provision of adequate infrastructure, such as that which is proposed by the proposed project.

Proposed facilities include aboveground structures such as an advanced water purification facility; new injection, extraction, and monitoring facilities; and storage reservoirs. Other facilities, such as pipelines, would be located underground. The underground facilities may require permanent easements. However, in general, all proposed conveyance pipelines would be aligned through the public rights-of-way and properties owned or to be acquired by IEUA to reduce the number of easements required for construction and maintenance.

The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9). Land would need to be purchased for each injection well. The extraction wells and blending and storage reservoir are anticipated to be located on vacant parcels. These parcels are anticipated to be located at the intersections of streets to provide for easy access during construction, maintenance, and rehabilitation activities. Siting of the facilities would include determination of the most suitable locations to place facilities, taking into consideration surrounding land uses. However, because the precise location for many future CBP facilities is presently unknown, wells may be developed across other designated land uses. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any project facilities that could potentially conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. As stated above, the cities and counties that are within the Chino Basin area have adopted General Plans that support the provision of adequate infrastructure; therefore, the project would not conflict with the goals and policies of the applicable General Plans. In addition, IEUA would coordinate directly with local agencies with jurisdiction to ensure compatibility with existing adjacent land uses. Mitigation is provided below to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

LU-1: Following selection of sites for future CBP-related facilities, each site and associated facility shall be evaluated for potential incompatibility with adjacent existing or proposed land uses. Where future facility operations can create significant incompatibilities (lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses, an alternative

site shall be selected, or subsequent CEQA documentation shall be prepared that identifies the specific project design features or mitigation measures that will be utilized to reduce potential incompatible activities or effects to below significance thresholds established in the general plan for the jurisdiction where the facility will be located.

Level of Significance After Mitigation: Less Than Significant Impact

Mitigation measure (MM) **LU-1** would ensure that the facilities associated with the CBP are developed in appropriate areas, and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. This measure will minimize impacts below significance thresholds. For these reasons, the proposed project would result in a less than significant impact related to potential conflicts with land use plans, policies, or regulations.

Level of Significance Before Mitigation: Less Than Significant

4.12.6 Cumulative Impacts

The project would not divide an established community and would not contribute to cumulative impacts related to the physical division of an established community. Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area. The project would help support water supply needs of future development within local cities and counties as envisioned in the applicable General Plans, in addition to providing dedicated environmental water supply to benefit Bay Delta instream flows. With implementation of mitigation to ensure land use conflicts are minimized upon implementation of the CBP, the project would not conflict with any land use plan, policy, or regulation in a manner that could result in a considerable contribution to a cumulative land use impact, significant or otherwise.

4.12.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of MM **LU-1**, no significant and unavoidable impacts relating to land use and planning would occur as a result of implementing the proposed project, and the project's potential impacts on land use and planning will be less than significant.

4.13 MINERAL RESOURCES

4.13.1 Introduction

This section assesses potential impacts to mineral resources from implementation of the CBP.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Mineral Resources
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- California Department of Conservation, Division of Mine Reclamation. 2021. Mines Online. https://maps.conservation.ca.gov/mol/Index.html (access 9/22/21)
- City of Chino. 2010. General Plan 2025. July. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%209%20Open%20Space%20&%20Conservation%20GP%20Update%202013.pdf (accessed 9/21/21)
- City of Montclair. 1999. General Plan. https://www.cityofmontclair.org/general-and-specific-plans/ (accessed 9/21/21)
- City of Pomona. 2014. City of Pomona General Plan Update, Corridors Specific Plan, Active Transportation Plan, and Green Plan Final Environmental Impact Report. March. https://www.pomonaca.gov/home/showpublisheddocument/2869/637539009362330000 (accessed 9/21/21)
- County of Los Angeles. 2015. General Plan. October. https://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-6_mineral_resources.pdf (accessed 9/21/21)
- County of Riverside. Riverside County General Plan. 2015. General Plan. December. https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 9/21/21)
- County of San Bernardino. 2019. San Bernardino Countywide Plan Draft PEIR. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-11-MIN.pdf (accessed 9/21/21)

No comments pertaining to mineral resources were received in response to the Notice of Preparation or at the scoping meeting held on behalf of the CBP.

4.13.2 Environmental Setting: Mineral Resources

Minerals are naturally occurring chemical elements or compounds, or groups of elements or compounds that were not formed by organisms. Naturally occurring concentrations of minerals in the Earth's crust are known as mineral deposits. Mineral resources are mineral deposits from which the economic extraction of a commodity (such as gold or copper) is currently potentially feasible. In addition to metallic minerals, materials used for construction (e.g., sand and aggregate), industrial and chemical processes (e.g., salt), and fuel (e.g., crude oil) are considered mineral resources in California.

In accordance with the Surface Mining and Reclamation Act of 1975 (SMARA), the California Department of Conservation, Division of Mines and Geology, currently known as the California Geological Survey (CGS), has mapped nonfuel mineral resources of the State to show where economically significant mineral deposits are either present or likely to occur based on the best available scientific data. These resources have been mapped using the California Mineral Land Classification System, which includes the following Mineral Resource Zones (MRZs):

- MRZ-1: Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.
- MRZ-2a: Areas where the available geologic information indicates that there are significant mineral deposits.
- MRZ-2b: Areas where the available geologic information indicates that there is a likelihood of significant mineral deposits.
- MRZ-3a: Areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined.
- MRZ-3b: Areas where the available geologic information indicates that mineral deposits are likely to exist; however, the significance of the deposit is undetermined. This class denotes areas where presence of the mineral is inferred and/or not visible from the surface geology.
- MRZ-4: Areas where there is not enough information available to determine the presence or absence of mineral deposits.

Mineral deposits in the Chino Basin area are important to many industries, including construction, transportation, and chemical processing. The value of mineral deposits within the Chino Basin area is enhanced by their close proximity to urban areas. However, these mineral deposits are endangered by the same urbanization that enhances their value. The only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap. The location of these resources is primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River.

The non-renewable characteristic of mineral deposits necessitates the careful and efficient development of mineral resources to prevent the unnecessary waste of these deposits due to careless exploitation and uncontrolled urbanization. Management of these mineral resources protects not only future development of mineral deposit areas, but also guides the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated.

The California Department of Conservation identifies large areas of the Chino Basin as MRZ-2 and MRZ-3. MRZ-3 designations are present in the cities of Chino, most portions of Ontario, Eastvale, and Jurupa Valley; the community of Rubidoux; and portions of the cities of Chino Hills, Montclair, Upland, Rancho Cucamonga, and Fontana. Most of the MRZ-3 areas contain construction aggregate deposits, the significance of which cannot be evaluated from preliminary data. MRZ-2 areas are located within the cities of Upland, Montclair, Rancho Cucamonga, Rialto, small portions of Jurupa Valley, the northern portion of Pomona, and the northern portion of Fontana, in areas located north of Interstate 10 and in areas surrounding the San Antonio Creek

as it flows through the Chino Basin.[1,2,3] Currently, there are no active mining activities within Montclair. Past mining activities have left several large pits in Montclair and Upland, which are now being used for flood control and water conservation purposes.[4] In addition there are no active mineral extraction activities within Pomona.[5]

MRZ-1 designations occur in a small portion of eastern Jurupa Valley, southern areas of Chino, and in Chino Hills.[1,2,3] MRZ-1 mineral deposits are comprised primarily of shale, siltstone, carbonates, and chlorite schist. These materials are considered unsuitable for use as aggregate. Fine grained sedimentary deposits also exist in this zone which are also unsuitable for use as aggregate.[6]

4.13.3 Regulatory Setting

The following regulations are applicable to mineral resources.

4.13.3.1 Federal

Executive Order 13817, Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals

Executive Order No. 13817 instructed the Secretaries of Interior and Defense to identify and publish a list of critical minerals, including rare earths, then develop a strategy to reduce the United States' reliance on other countries to supply these increasingly important ingredients to America's defensive and economic security. The United States Department of Commerce released A Federal Strategy to Ensure Secure and Reliable Supplies of Critical Minerals, an interagency report that outlines a government-wide action plan to ensure the United States has secure and reliable supplies of critical minerals. According to the Department of Commerce, the United States is dependent on imports for more than 50 percent of domestic demand for 29 of the 35 minerals named on the United States Geological Survey critical list. In addition, the United States lacks any domestic production for 14 of the minerals on the critical list and does not have domestic access to processing and manufacturing capabilities for many. The Mountain Pass Mine in Nevada was once the world's leading supplier of rare earth minerals, but China began to dominate the market in the 1990s. Mountain Pass has focused on achieving greater autonomy with a $1.7 billion separations process system that would allow it to refine and make rare earth products available for customers outside of China.

[1] County of San Bernardino. 2019. San Bernardino Countywide Plan Draft PEIR. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-11-MIN.pdf (accessed 9/21/21)
[2] County of Los Angeles. 2015. General Plan. October. https://planning.lacounty.gov/assets/upl/project/gp_2035_2014-FIG_9-6_mineral_resources.pdf (accessed 9/21/21)
[3] Riverside County General Plan. 2015. General Plan. December. https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 9/21/21)
[4] City of Montclair. 1999. General Plan. https://www.cityofmontclair.org/general-and-specific-plans/ (accessed 9/21/21)
[5] City of Pomona. 2014. City of Pomona General Plan Update, Corridors Specific Plan, Active Transportation Plan, and Green Plan Final Environmental Impact Report. March. https://www.pomonaca.gov/home/showpublisheddocument/2869/637539009362330000 (accessed 9/21/21)
[6] City of Chino. 2010. General Plan 2025. July. http://p1cdn4static.civiclive.com/UserFiles/Servers/Server_10382578/File/City%20Hall/Plans/General/NEW%209%20Open%20Space%20&%20Conservation%20GP%20Update%202013.pdf (accessed 9/21/21)

4.13.3.2 State

Surface Mining and Reclamation Act: California Public Resources Code Sections 2710 et seq.
SMARA is the primary regulatory framework for mining in California. It delegates specific regulatory authority to local jurisdictions. SMARA requires the State Geologist to identify important mineral deposits in the state threatened by land uses that would be incompatible with future extraction and classify them into MRZs. Local jurisdictions are required to enact specific procedures to guide mineral conservation and extraction at identified sites and to incorporate mineral resource management policies into their general plans.

California State Mining and Geology Board
The California State Mining and Geology Board (SMGB) provides professional expertise and serves as a regulatory, policy, and hearing body representing the State's interest in the development, utilization, and conservation of mineral resources, the reclamation of mined lands, and the development and dissemination of geologic and seismic hazard information. The nine-member SMGB operates within the Department of Conservation and is granted certain autonomous responsibilities and obligations under several statutes, including the Alquist-Priolo Earthquake Fault Zoning Act, the Seismic Hazards Mapping Act, and SMARA.

California Department of Conservation, Division of Mine Reclamation
The California Department of Conservation, Division of Mine Reclamation (DMR) provides a measure of oversight for local governments as they administer SMARA within their respective jurisdictions. DMR may provide comments to lead agencies on a mining operation’s reclamation plan and financial assurance and, jointly with SMGB, is charged with administering actions that encourage SMARA compliance. The primary focus is on existing mining operations and reclaiming mined lands to a usable and safe condition that is readily adaptable for alternative land uses. Issues related to abandoned legacy mines are addressed in the Abandoned Mine Lands Program.

California Geological Survey
The CGS provides objective geologic expertise and information about California’s diverse nonfuel mineral resources, including their related hazards, through maps, reports, and other data products to assist governmental agencies, mining companies, consultants, and the public in recognizing, developing, and protecting important mineral resources.

4.13.3.3 Local

There are no local regulations related to mineral resources.

4.13.4 Thresholds of Significance

According to Appendix G, Section XII, of the CEQA Guidelines, a project would have a significant effect on mineral resources if the project would:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

4.13.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP to mineral resources.

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

Implementation of the proposed project is unlikely to interfere with mining of mineral resources. Much of the Chino Basin has been urbanized, resulting in very few areas containing mineral resources that are not already utilized for mining activities. As outlined in the preceding sections, the only significant mineral resources that occur within or near the project area are limestone, sand and gravel, crushed rock and rip rap located primarily in the Jurupa and Pedley Hills, and also near the Santa Ana River. Based upon a review of mines located within the Chino Basin area, the proposed advanced water purification, new injection and extraction facilities, conveyance facilities, and water system interconnections are not anticipated to be located on existing mineral extraction sites, as many of these facilities will be installed within the footprints of existing water utility sites, or will otherwise be located within areas that have been developed with residential, commercial, industrial or open space uses.[7,8] Projects in these types of locations would have no potential to adversely impact mineral resources because the resources would already be covered with facilities that would make recovery unlikely, and because mineral resource recovery is generally not a compatible land use adjacent to residential, commercial. Therefore, the installation and operation of CBP facilities has little potential to have a direct adverse impact on mineral resources, unless the parcel(s) selected for such facilities are within an active mining area or are designated for recovery of mineral resources. Given that the proposed locations for many CBP facilities have not yet been selected, there is a minor potential for the proposed project to result in the loss of availability of a known valuable mineral resource or result in the loss of availability of a locally important mineral resource recovery site. As such, implementation of mitigation measure (MM) **MR-1** is required to reduce the potential for impacts to mineral resources to a less than significant level.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

MR-1: ***IEUA shall locate each facility proposed under the CBP outside of sites designated for the extraction of or as containing significant mineral resources (such as, located within MRZ-2 zones) or otherwise identified by the local jurisdiction as containing important mineral resources (such as, designated by the local general plan as being located within a mineral extraction related land use). Where it is not feasible to locate such facilities outside of sites designated for mineral resources, subsequent CEQA documentation shall be prepared to identify specific measures to mitigate the loss of mineral resources.***

Level of Significance After Mitigation: Less Than Significant

[7] San Bernardino County. 2019. Countywide Plan Environmental Impact Report. June. http://countywideplan.com/wp-content/uploads/2019/06/Ch_05-11-MIN.pdf (accessed 9/22/21)
[8] California Department of Conservation, Division of Mine Reclamation. 2021. Mines Online. https://maps.conservation.ca.gov/mol/Index.html (access 9/22/21)

The implementation of MM **MR-1** would ensure that the proposed facilities associated with the CBP would not result in significant loss of mineral resources through either relocation, or compensation for development proposed to be located within an area containing significant mineral resources.

4.13.6 Cumulative Impacts

The project has a minor potential to result in the loss of availability of mineral resources. Future cumulative development could be located in areas known to contain locally important mineral resources. Therefore, cumulative development could result in significant mineral impacts. The proposed CBP projects would result in less than significant impacts to important mineral resources and mineral resource sites through the implementation of MM **MR-1**, which would ensure that CBP facilities are relocated outside of locations containing important mineral resource, or compensate for development proposed to be located within an area containing significant mineral resources. As such, the project's contribution to cumulative impacts would be less than cumulatively considerable. Therefore, the proposed project's cumulative impact on mineral resources is less than significant.

4.13.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of MM **MR-1**, no significant and unavoidable impacts relating to mineral resources would occur as a result of implementing the proposed project.

4.14 NOISE

4.14.1 Introduction

This section assesses potential impacts related to noise from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Noise and Vibration
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- California Department of Transportation. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed August 2021).
- California Department of Transportation. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).
- California Office of Planning and Research. 2017. State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf (accessed September 2021).
- Chino Hills, City of. 2015. City of Chino Hills General Plan. February 24, 2015. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed September 2021).
- Crocker, Malcolm J. Crocker (Editor). 2007. Handbook of Noise and Vibration Control Book, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
- Federal Highway Administration. 2006. FHWA Highway Construction Noise Handbook. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/ (accessed August 2021).
- Federal Highway Administration. 2011. Highway Traffic Noise: Analysis and Abatement Guidance (FHWA-HEP-10-025). https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (accessed October 2021).
- Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment Manual. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).
- Kinsler, Lawrence E. and R. Frey, Austin and B. Coppens, Alan and V. Sanders, James. 1999. Fundamentals of Acoustics, 4th Edition. ISBN 0-471-84789-5. Wiley-VCH, December 1999.
- Montclair Municipal Code Sections 6.12.040 and Montclair Municipal Code Section 6.12.050
- Ontario, City of. 2011. Ontario International Airport Land Use Compatibility Plan.
- Ontario Municipal Code Section 5-29.04(a)
- Pomona Municipal Code Section 18-3111
- Rancho Cucamonga Municipal Code Tables 17.66.050-1 and 17.66.110-1
- Rialto Municipal Code Sections 9.50.070(B)(1) and 9.50.070(B)(2)
- Upland Municipal Code Sections 9.40.040 and 9.40.070

No comments pertaining to noise were received in response to the Notice of Preparation. No comments pertaining to noise were received at the Scoping Meeting held on behalf of the project.

4.14.2 Environmental Setting: Noise and Vibration

Environmental Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by the hearing organs (e.g., the human ear). Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment.[1]

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz (Hz) and less sensitive to frequencies around and below 100 Hz.[2] Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 dB; similarly, dividing the energy in half would result in a decrease of 3 dB.[3]

Human perception of noise has no simple correlation with sound energy: the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not “sound twice as loud” as one source. It is widely accepted that the average healthy ear can barely perceive an increase (or decrease) of up to 3 dBA in noise levels (i.e., twice [or half] the sound energy); that a change of 5 dBA is readily perceptible (8 times the sound energy); and that an increase (or decrease) of 10 dBA sounds twice (or half) as loud (10.5 times the sound energy). [4]

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in sound level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of sources (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Noise levels from a point source (e.g., construction, industrial machinery, ventilation units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance.[5]

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[1] California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed August 2021).
[2] Kinsler, Lawrence E. and R. Frey, Austin and B. Coppens, Alan and V. Sanders, James. 1999. Fundamentals of Acoustics, 4th Edition. ISBN 0-471-84789-5. Wiley-VCH, December 1999.
[3] Crocker, Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
[4] California Department of Transportation (Caltrans). 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed August 2021).
[5] Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed October 2021).

The propagation of noise is also affected by the intervening ground, known as ground absorption. A hard site, such as a parking lot or smooth body of water, receives no additional ground attenuation and the changes in noise levels with distance (drop-off rate) result simply from the geometric spreading of the source. An additional ground attenuation value of 1.5 dBA per doubling of distance applies to a soft site (e.g., soft dirt, grass, or scattered bushes and trees.[6] Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver. Structures can substantially reduce occupants' exposure to noise as well. Modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.[7]

The impact of noise is not a function of sound level alone. The time of day when noise occurs and the duration of the noise are also important. Most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}); it considers both duration and sound power level. The L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time. Typically, L_{eq} is summed over a one-hour period. L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period.[8] Normal conversational levels are in the 60 to 65 dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations.[9]

Noise that occurs at night tends to be more disturbing than that occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m.[10] Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. Quiet suburban areas typically have 24-hour noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL ranges.

Groundborne Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a

[6] Ibid.
[7] Federal Highway Administration (FHWA). 2011. *Highway Traffic Noise: Analysis and Abatement Guidance* (FHWA-HEP-10-025). https://www.fhwa.dot.gov/environment/noise/regulations_and_guidance/analysis_and_abatement_guidance/revguidance.pdf (accessed October 2021).
[8] Crocker, Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
[9] Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).
[10] Caltrans. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed October 2021).

vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body is from a low of less than 1 Hz up to a high of about 200 Hz.[11]

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source.[12] Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances.[13] When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (ppv) or RMS vibration velocity. The ppv and RMS velocity are normally described in inches per second (in/sec). The ppv is defined as the maximum instantaneous positive or negative peak of a vibration signal.[14] **Table 4.14-1** summarizes the vibration limits recommended by the American Association of State Highway and Transportation Officials for structural damage to buildings.

Table 4.14-1
MAXIMUM VIBRATION LEVELS FOR PREVENTING DAMAGE

Type of Situation	Vibration Level (in/sec ppv)
Historic sites or other critical locations	0.1
Residential buildings, plastered walls	0.2–0.3
Residential buildings in good repair with gypsum board walls	0.4–0.5
Engineered structures, without plaster	1.0–1.5

in/sec = inches per second; ppv = peak particle velocity
Source: California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).

[11] Crocker, Malcolm J. Crocker (Editor). 2007. *Handbook of Noise and Vibration Control Book*, ISBN: 978-0-471-39599-7, Wiley-VCH, October.
[12] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).
[13] Caltrans. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).
[14] Ibid.

In addition to the potential for building damage, the human body responds to vibration signals. However, unlike buildings, which are rigid, it takes some time for the human body to respond to vibration. In a sense, a building responds to the instantaneous movement while the human body responds to average vibration amplitude, which is measured as RMS. The averaging of the particle generally results in the rms conservatively being equivalent to 71 percent of the ppv. Thus, human annoyance usually results in a more restrictive vibration limit than structural damage limits.

Table 4.14-2
HUMAN RESPONSE TO STEADY STATE VIBRATION

Human Response	Vibration Level (in/sec ppv)
Very disturbing	3.6 (at 2 Hz) – 0.4 (at 20 Hz)
Disturbing	0.7 (at 2 Hz) – 0.17 (at 20 Hz)
Strongly perceptible	0.10
Distinctly perceptible	0.035
Slightly perceptible	0.012

in/sec = inches per second; ppv = peak particle velocity; Hz = Hertz
Source: Caltrans. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).

Table 4.14-3
HUMAN RESPONSE TO TRANSIENT VIBRATION

Human Response	Vibration Level (in/sec ppv)
Severe	2.0
Strongly perceptible	0.9
Distinctly perceptible	0.24
Barely perceptible	0.035

Source: Caltrans. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).

Sensitive Receivers

Noise-sensitive land uses are generally considered to be residential homes, transient lodging (i.e., hotels and motels), hospitals, nursing homes, public assembly and entertainment venues (e.g., auditoriums, theaters, music halls, meeting halls), places of worship, schools, daycare centers, libraries, museums, parks, playgrounds, recreation and open space areas, and cemeteries. Each local jurisdiction typically includes its definition of noise-sensitive land uses in the Noise Element of its General Plans and/or in its Noise Ordinance.

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as schools, places of worship, and hospitals. Vibration-sensitive receivers also include other places where people sleep, such as hotels and motels, fragile buildings, and buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studios or laboratory facilities with sensitive equipment).

Noise- and vibration-sensitive receivers are located throughout the Chino Basin. Because the specific locations of individual projects that may be implemented under the proposed CBP are not

all known at this time, the specific locations and proximities of sensitive receivers nearest to the sites of all individual projects that may be implemented under the proposed CBP are also not known. There is the potential for sensitive receivers to be within 500 feet of many of the facilities constructed under the CBP. However, the AWPF, which is proposed to be located at IEUA's existing regional recycled water plant RP-4 located at 12811 6th Street in Rancho Cucamonga, is not within 1,000 feet of sensitive receivers.

Existing Noise Environment

Existing noise levels vary widely throughout the Chino Basin depending on the nature, type, and intensity of existing development. Rural and suburban residential areas generally experience lower ambient noise levels while areas in highly urbanized regions, along high-volume roadways, and near industrial development generally experience higher ambient noise levels. Generally, quiet suburban areas typically have noise levels in the range of 40 to 50 dBA L_{eq}, while those along arterial streets are in the 50 to 60+ dBA L_{eq} range. Areas in close proximity to one or more highways, such as development within 500 feet of the I-15/I-10 interchange, typically have noise levels in the range of 65 to 80+ dBA L_{eq}.

The existing noise environment within the Chino Basin is dominated primarily by transportation-related noise sources. These noise sources include traffic noise from local and regional roadways, railroad lines, and several airports within the project area, including Ontario International Airport, San Bernardino International Airport, Riverside Municipal Airport, Corona Municipal Airport, Chino Airport, Cable Airport, Flabob Airport, and Brackett Field Airport. Secondary non-transportation noise sources include industrial activity, mining, music, amplified sound, and activities on private property. For example, existing industrial activity noise from normal operations is audible around the California Steel Plant in Fontana on the steel plant property. Regardless, the predominant noise sources are transportation-related activities.

4.14.3 Regulatory Setting

The proceeding section lists State, federal, and local regulations regarding noise.

4.14.3.1 Federal

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, the USEPA issued guidance levels for the protection of public health and welfare in residential land use areas.15 The guidance levels specified an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA. These guidance levels are not considered as standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the proposed program.

[15] USEPA, EPA Identifies Noise Levels Affecting Health and Welfare. April 12, 1974.

4.14.3.2 State

California Noise Act

The California Noise Control Act of 1973 gave cities and communities the power to set noise ordinances and enforce them as necessary. The goal of the state and local governments is to prohibit unnecessary, annoying, intrusive, or dangerous noise. California Government Code Section 65302 encourages each local government entity to implement a noise element as part of its general plan. In addition, the Governor's Office of Planning and Research has developed guidelines for preparing noise elements, which include recommendations for evaluating the compatibility of various land uses as a function of community noise exposure.[16]

4.14.3.3 Local

By law, each city and county in California must include a Noise Element in its General Plan. Most jurisdictions in the Chino Basin have also adopted Noise Ordinances, and several have adopted noise guidelines for CEQA analysis as well. It should be noted that California Government Code Section 53091 exempts IEUA, as a regional public water purveyor and utility, from local zoning and building ordinances but not from codified stand-alone noise ordinances. Despite this exemption from local planning ordinances, for purposes of full disclosure of potential impacts on the environment, this assessment of potential noise impacts broadly considers the potential for noise generated by individual projects that may be implemented under the proposed CBP to exceed locally-applicable noise-related standards contained in the general plans and noise ordinances of the cities and counties in the Chino Basin.

The Chino Basin encompasses a variety of local jurisdictions, including the cities of Chino, Chino Hills, Eastvale, Fontana, Jurupa Valley, Montclair, Ontario, Pomona, Rancho Cucamonga, Rialto, and Upland as well as portions of unincorporated San Bernardino County and Riverside County. The local noise standards and regulations applicable to the proposed CBP are presented in the following subsections for each of these jurisdictions.

San Bernardino County Development Code

83.01.080 Noise.

B. Noise Impacted Areas. Areas within the County shall be designated as "noise-impacted" if exposed to existing or projected future exterior noise levels from mobile or stationary sources exceeding the standards listed in Subdivision (d) (Noise Standards for Stationary Noise Sources) and Subdivision (e) (Noise Standards for Adjacent Mobile Noise Sources), below. New development of residential or other noise-sensitive land uses shall not be allowed in noise-impacted areas unless effective mitigation measures are incorporated into the project design to reduce noise levels to these standards. Noise-sensitive land uses shall include residential uses, schools, hospitals, nursing homes, religious institutions, libraries, and similar uses.
C. Noise Standards for Stationary Noise Sources.
   1. Noise Standards. Table 83-2 (reproduced herein as **Table 4.14-4**) describes the noise standard for emanations from a stationary noise source, as it affects adjacent properties.

[16] California Office of Planning and Research. 2017. *State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines*. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf (accessed September 2021).

Table 4.14-4
COUNTY OF SAN BERNARDINO NOISE STANDARDS FOR STATIONARY NOISE SOURCES (dBA L_{eq})

Affected Land Uses (Receiving Noise)	7:00 a.m. – 10:00 p.m.	10:00 p.m. – 7:00 a.m.
Residential	55	45
Professional Services	55	55
Other Commercial	60	60
Industrial	70	70

dBA = A-weighted decibel; Leq = equivalent noise level
Source: San Bernardino County Development Code, Table 83-2

2. Noise Limit Categories. No person shall operate or cause to be operated a source of sound at a location or allow the creation of noise on property owned, leased, occupied, or otherwise controlled by the person, which causes the noise level, when measured on another property, either incorporated or unincorporated, to exceed any one of the following:
   a. The noise standard for the receiving land use as specified in Subdivision (b) (Noise-Impacted Areas), above, for a cumulative period of more than 30 minutes in any hour.
   b. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour.
   c. The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour.
   d. The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour.
   e. The noise standard plus 20 dBA for any period of time.

D. Noise Standards for Adjacent Mobile Noise Sources. Noise from mobile sources may affect adjacent properties adversely. When it does, the noise shall be mitigated for any new development to a level that shall not exceed the standards described in the following Table 83-3 (reproduced herein as **Table 4.14-5**).

Table 4.14-5
COUNTY OF SAN BERNARDINO NOISE STANDARDS FOR ADJACENT MOBILE NOISE SOURCES

Land Use		dBA L_{dn} (or CNEL)	
Categories	**Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single and multi-family, duplex, mobile homes	45	60[3]
Commercial	Hotel, motel, transient housing	45	60[3]
	Commercial retail, bank, restaurant	50	N/A
	Office building, research and development, professional offices	45	65
	Amphitheater, concert hall, auditorium, movie theater	45	N/A
Institutional/Public	Hospital, nursing home, school classroom, religious institution, library	45	65
Open Space	Park	N/A	65

dBA = A-weighted decibel; Ldn = Day-Night Average Level; CNEL = Community Noise Equivalent Level
1 The indoor environment shall exclude bathrooms, kitchens, toilets, closets and corridors.
2 The outdoor environment shall be limited to:
- Hospital/office building patios
- Hotel and motel recreation areas
- Mobile home parks
- Multi-family private patios or balconies

- Park picnic areas
- Private yard of single-family dwellings
- School playgrounds

3 An exterior noise level of up to 65 dBA (or CNEL) shall be allowed provided exterior noise levels have been substantially mitigated through a reasonable application of the best available noise reduction technology, and interior noise exposure does not exceed 45 dBA (or CNEL) with windows and doors closed. Requiring that windows and doors remain closed to achieve an acceptable interior noise level shall necessitate the use of air conditioning or mechanical ventilation.
Source: San Bernardino County Development Code, Table 83-3

E. Increases in Allowable Noise Levels. If the measured ambient level exceeds any of the first four noise limit categories in Subsection (d)(2), above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category in Subsection (d)(2), above, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.
F. Reductions in Allowable Noise Levels. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in Table 83-2 (reproduced herein as **Table 4.13-5**) shall be reduced by 5 dBA.
G. Exempt Noise. The following sources of noise shall be exempt from the regulations of this Section:
    1. Motor vehicles not under the control of the commercial or industrial use.
    2. Emergency equipment, vehicles, and devices.
    3. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

83.01.090 Vibration.

A. Vibration Standard. No ground vibration shall be allowed that can be felt without the aid of instruments at or beyond the lot line, nor shall any vibration be allowed which produces a particle velocity greater than or equal 0.2 in/sec measured at or beyond the lot line.
C. Exempt Vibrations. The following sources of vibration shall be exempt from the regulations of this Section.
    1. Motor vehicles not under the control of the subject use.
    2. Temporary construction, maintenance, repair, or demolition activities between 7:00 a.m. and 7:00 p.m., except Sundays and Federal holidays.

County of Riverside Code of Ordinances

9.52.020 Exemptions.

Sound emanating from the following sources is exempt from the provisions of this chapter:

A. Facilities owned or operated by or for a governmental agency;
B. Capital improvement projects of a governmental agency;
L. Heating and air conditioning equipment.

9.52.040 General sound level standards.

No person shall create any sound, or allow the creation of any sound, on any property that causes the exterior sound level on any other occupied property to exceed the sound level standards set forth in Table 1 (reproduced herein as **Table 4.14-6**).

Table 4.14-6
COUNTY OF RIVERSIDE SOUND LEVEL STANDARDS

General Plan Land Use Designation	General Plan Land Use Designation Name	Density	Maximum Decibel Level (dB L_{max})	
			7:00 a.m. - 10:00 p.m.	10:00 p.m. - 7:00 a.m.
Community Development				
EDR	Estate Density Residential	2 acres	55	45
VLDR	Very Low Density Residential	1 acre	55	45
LDR	Low Density Residential	½ acre	55	45
MDR	Medium Density Residential	2 - 5	55	45
MHDR	Medium High Density Residential	5 – 8	55	45
HDR	High Density Residential	8 - 14	55	45
VHDR	Very High Density Residential	14 – 20	55	45
H'TDR	Highest Density Residential	20+	55	45
CR	Retail Commercial		65	55
CO	Office Commercial		65	55
CT	Tourist Commercial		65	55
CC	Community Center		65	55
LI	Light Industrial		75	55
HI	Heavy Industrial		75	75
BP	Business Park		65	45
PF	Public Facility		65	45
SP	Specific Plan-Residential		55	45
	Specific Plan-Commercial		65	55
	Specific Plan-Light Industrial		75	55
	Specific Plan-Heavy Industrial		75	75
Rural Community				
EDR	Estate Density Residential	2 acres	55	45
VLDR	Very Low Density Residential	1 acre	55	45
LDR	Low Density Residential	½ acre	55	45
Rural				
RR	Rural Residential	5 acres	45	45
RM	Rural Mountainous	10 acres	45	45
RD	Rural Desert	10 acres	45	45
Agriculture				
AG	Agriculture	10 acres	45	45

General Plan Land Use Designation	General Plan Land Use Designation Name	Density	Maximum Decibel Level (dB L_{max})	
			7:00 a.m. - 10:00 p.m.	10:00 p.m. - 7:00 a.m.
Open Space				
C	Conservation		45	45
CH	Conservation Habitat		45	45
REC	Recreation		45	45
RUR	Rural	20 acres	45	45
W	Watershed		45	45
MR	Mineral Resources		75	45

dB = decibel; L_{max} = instantaneous maximum noise level
Source: Riverside County Code Section 9.52.040, Table 1

9.52.060 - Special sound sources standards.

The general sound level standards set forth in Section 9.52.040 of this chapter apply to sound emanating from all sources, including the following special sound sources, and the person creating, or allowing the creation of, the sound is subject to the requirements of that section. The following special sound sources are also subject to the following additional standards, the failure to comply with which constitutes separate violations of this chapter:

B. Power Tools and Equipment. No person shall operate any power tools or equipment between the hours of 10:00 p.m. and 8:00 a.m. such that the power tools or equipment are audible to the human ear inside an inhabited dwelling other than a dwelling in which the power tools or equipment may be located. No person shall operate any power tools or equipment at any other time such that the power tools or equipment are audible to the human ear at a distance greater than 100 feet from the power tools or equipment.

9.52.070 - Exceptions.

Exceptions may be requested from the standards set forth in Section 9.52.040 or 9.52.060 of this chapter and may be characterized as construction-related, single-event or continuous-events exceptions.

A. Application and Processing.
   1. Construction-Related Exceptions. An application for a construction-related exception shall be made to and considered by the director of building and safety on forms provided by the building and safety department and shall be accompanied by the appropriate filing fee. No public hearing is required.

City of Chino Municipal Code

9.40.030 Designated noise zones.

The properties hereinafter described are assigned to the following noise zones:

- Noise Zone I: All single-, double- and multiple-family residential properties.
- Noise Zone II: All commercial properties.
- Noise Zone III: All manufacturing or industrial properties.

9.40.040 Exterior noise standards.

The following noise standards, unless otherwise specifically indicated, shall apply to all residential property with a designated noise zone:

These criteria are given in terms of allowable noise levels for a given period of time at the residential property boundary. Higher noise levels are permitted during the day (7:00 a.m. to 10:00 p.m.) than the night (10:00 p.m. to 7:00 a.m.). **Table 4.14-7** shows the acceptable levels at residential land uses during the daytime and nighttime.

Table 4.14-7
CITY OF CHINO EXTERIOR NOISE ORDINANCE CRITERIA FOR RESIDENTIAL PROPERTIES (ZONE 1)

Maximum Time of Exposure	Noise Metric	Noise Level Not to Exceed	
		7:00 a.m. – 10:00 p.m.	10:00 p.m. -7:00 a.m.
30 min/hr	L_{50}	55 dBA	50 dBA
15 min/hr	L_{25}	60 dBA	55 dBA
5 min/hr	$L_{8.3}$	65 dBA	60 dBA
1 min/hr	$L_{1.7}$	70 dBA	65 dBA
Any period of time	L_{max}	75 dBA	70 dBA

min/hr = minutes per hour; dBA = A-weighted decibel
Source: Chino Municipal Code Section 9.40.040

Each of the noise limits specified here shall be reduced by 5 dBA for impulse or simple tone noises, or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

It is unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed:

A. The noise standard for a cumulative period of more than 30 minutes in any hour; or
B. The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour; or
C. The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or
D. The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
E. The noise standard plus 20 dBA for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

If the measurement location is on boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

If the intruding noise source is continuous and cannot be reasonably discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the source is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement location's designated land use and for the time of the day the noise level is measured.

A. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the director or his/her duly authorized deputy for the purpose of establishing the existing ambient noise level at the measurement location.

9.40.060 Special Provisions.

D. Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided said activities do not take place outside the hours for construction as defined in Section 15.44.030 of this code, and provided the noise standard of 65 dBA plus the limits specified in Section 9.40.040(B) as measured on residential property and any vibration created does not endanger the public health, welfare and safety.

9.40.070 Schools, churches, libraries, health care institutions – Special provisions.

It shall be deemed unlawful for any person to create any noise which causes the noise level at any school, hospital or similar health care institution, church or library while the same is in use, to exceed the noise standards specified in Section 9.40.040 prescribed for the assigned noise zone level, unreasonably interferes with the use of such institutions, or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institutions, provided conspicuous signs are displayed in three separate locations within one-tenth-mile of the institution or facility indicating a quiet zone.

9.40.110 Vibration

Notwithstanding other sections of this chapter, it is unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this chapter, the perception threshold shall be presumed to be more than 0.05 in/sec RMS vertical velocity.

City of Chino Hills Municipal Code

16.48.020 Noise.

B. Noise Standards.
   1. The noise standards contained in Table N-1 “Noise /Land Use Compatibility Matrix" in the Noise Element of the General Plan (reproduced herein as **Table 4.14-8**) shall apply to land uses Citywide and shall be used to define acceptable and unacceptable Noise levels.
   2. No person shall operate or cause to be operated any source of sound at any location or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level, when measured on any other property, either incorporated or unincorporated, to exceed:
      a) The "Zone C" noise standard for that receiving land use specified in Table N-1 of the General Plan Noise Element (reproduced herein as **Table 4.14-8**) for a cumulative period of more than 30 minutes in any hour; or
      b) The noise standard plus 5 dBA for a cumulative period of more than five minutes in any hour; or
      c) The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour; or

d) The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
e) The noise standard plus 20 dBA for any period of time.

3. If the measured ambient level exceeds any of the first four noise limit categories above, the allowable noise exposure standard shall be increased to reflect the ambient noise level. If the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.
4. If the alleged offense consists entirely of impact noise or simple tone noise, each of the noise levels in subsection (B)(2)(a) of this section shall be reduced by 5 dBA.

Table 4.14-8
CITY OF CHINO HILLS LAND USE/NOISE COMPATIBILITY MATRIX

Land Use Categories		CNEL	
Categories	**Compatible Uses**	**Interior[1]**	**Exterior[2]**
Residential	Single-Family, Duplex, Multiple-Family	45[3]	65[5]
	Mobile Homes		65[4]
Commercial	Hotel, Motel, Transient, Lodging	45[3]	65
	Commercial, Retail, Bank, Restaurant, Health clubs	55	
	Office Buildings, Research and Development, Professional Offices	50	
	Amphitheater, Concert Hall, Auditorium, Meeting Hall, Movie Theater	45	
	Gym (multi-purpose)	50	
	Manufacturing, Warehousing, Wholesale, Utilities	65	
Open Space	Parks		65
Institutional/ Public Facility	Hospital, Schools, Classrooms	45[3]	65
	Churches, Libraries	45[3]	

CNEL = Community Noise Equivalent Level; dB = decibel
[1] Interior environment excludes bathrooms, toilets, closets, and corridors.
[2] Outdoor environment limited to private yard of single-family or multifamily residential private patio that is accessed by a means of exit from inside the unit; mobile home park; hospital patio; park picnic area; school playground; and hotel and motel recreation area.
[3] Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided pursuant to Uniform Building Code requirements.
[4] Exterior noise level shall be such that interior noise level will not exceed 45 dB CNEL.
[5] Multifamily developments with balconies that do not meet the 65 dB CNEL standard are required to provide occupancy disclosure notices to all future tenants regarding potential noise impacts.
Source: Chino Hills, City of. 2015. *City of Chino Hills General Plan*. February 24, 2015. https://www.chinohills.org/DocumentCenter/View/11275/General-Plan---Final-approved-by-CC-2-14-15-4-21?bidId= (accessed September 2021).

16.48.030 Vibration.

A. Vibration Standard. No ground vibration shall be allowed which can be felt without the aid of instruments at or beyond the subject property line, nor will any vibration be permitted which produces a particle velocity greater than or equal to 0.2 in/sec measured at or beyond the lot line.

City of Eastvale

The City of Eastvale has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above, in Eastvale Municipal Code Chapter 8.52.

City of Fontana Municipal Code

Sec. 18-63. Scope, enumeration of prohibited noises.

(a) This article shall apply to loud, excessive, impulsive or intrusive interior and exterior sound or noise that annoys or disturbs persons of ordinary sensibilities emanating from any type of property or source within the City.

(b) The following acts, which create loud, excessive, impulsive or intrusive sound or noise that annoys or disturbs persons of ordinary sensibilities from a distance of 50 feet or more from the edge of the property, structure or unit in which the source is located, are declared to be in violation of this article, but such enumeration shall not be deemed to be exclusive, namely:

(4) Exhausts. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motorboat or motor vehicle, except through a muffler or other device which will effectively prevent loud, excessive, impulsive or intrusive noises therefrom; provided, however, that the provisions of this section and article do not apply to any raceway, racetrack or drag strip which is being operated in accordance with the provisions of chapter 17, article IX.

(6) Loading, unloading or opening boxes. The creation of a loud, excessive, impulsive or intrusive and excessive noise in connection with loading or unloading of any vehicle or the opening and destruction of bales, boxes, crates and containers.

(7) Construction or repairing of buildings or structures. The erection (including excavating), demolition, alteration or repair of any building or structure other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays and between the hours of 8:00 a.m. and 5:00 p.m. on Saturdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or structure or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he shall further determine that loss or inconvenience would result to any party in interest, he may grant permission for such work to be done on weekdays within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

(8) Noise near schools, courts, place of worship or hospitals. The creation of any loud, excessive, impulsive or intrusive noise on any street adjacent to any school, institution of learning, places of worship or court while the premises are in use, or adjacent to any hospital which unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital; provided conspicuous signs are displayed in such streets indicating that the street is a school, hospital or court street.

Sec. 30-543 – Industrial Zoning Districts – Performance Standards - Noise and vibration.

(a) Noise levels. No person shall create or cause to be created any sound which exceeds the noise levels in this section as measured at the property line of any residentially zoned property:

(1) The noise level between 7:00 a.m. and 10:00 p.m. shall not exceed 70 dBA.

(2) The noise level between 10:00 p.m. and 7:00 a.m. shall not exceed 65 dBA.

(c) Vibration. No person shall create or cause to be created any activity which causes a vibration which can be felt beyond the property line of any residentially zoned property with or without the aid of an instrument.

City of Jurupa Valley Municipal Code

The City of Jurupa Valley has adopted the same ordinances outlined under the County of Riverside Code of Ordinances, above, in Jurupa Valley Municipal Code Chapter 11.05 (Noise Regulations).

City of Montclair Municipal Code

6.12.040 - Base ambient exterior noise levels.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows in **Table 4.14-9**.

Table 4.14-9
CITY OF MONTCLAIR BASE AMBIENT EXTERIOR NOISE LEVELS

Zone	Time	Decibels
Residential	10:00 p.m. - 7:00 am.	45 dBA
Residential	7:00 a.m. - 10:00 p.m.	55 dBA
Commercial	10:00 p.m. - 7:00 am.	55 dBA
Commercial	7:00 a.m. - 10:00 p.m.	65 dBA
Industrial	10:00 p.m. - 7:00 am.	60 dBA
Industrial	7:00 a.m. - 10:00 p.m.	70 dBA

dBA = A-weighted decibel
Source: Montclair Municipal Code Section 6.12.040

6.12.050 - Maximum residential/nonresidential noise levels.

It is unlawful for any person within any zone to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level, when measured on the exterior of the property, to exceed the base ambient noise level as adjusted in **Table 4.14-10**.

Table 4.14.-10
CITY OF MONTCLAIR MAXIMUM RESIDENTIAL/NONRESIDENTIAL NOISE LEVELS

Noise Level	Maximum Duration Period
Exceeded Level (BANL)	30 minutes in any hour
5—9 Dba	above BANL 15 minutes in any hour
10—14 dBA	above BANL five minutes in any hour
15—16 dBA	above BANL one minute in any hour
16 dBA or greater above BANL	Not permitted

BANL = base ambient noise level; dBA = A-weighted decibel
Source: Montclair Municipal Code Section 6.12.050

6.12.060 - Exemptions.

The following activities shall be exempt from the provisions of this chapter:

D. Noise sources associated with construction, repair, remodeling or grading of any real property, provided said activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on any given day and provided that the Building Official determines that the public health and safety will not be impaired. Industrial or commercial construction or public improvements, not otherwise feasible except between these hours, may be approved on a limited, short-term basis, subject to the approval of the Director of Community Development.

6.12.100 – Specific noises prohibited.

Notwithstanding any provision of this chapter, the following specified acts are declared to be unlawful and a nuisance in violation of this chapter:

D. Machinery, Equipment, Fans and Air Conditioning. It is unlawful for any person to operate, cause to operate, or permit the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise level by 5 dBA.
G. Exhaust. The discharge into the open air of the exhaust of any steam engine, stationary internal combustion engine, motorboat, or motor vehicle, except through a muffler device that effectively prevents loud or explosive noises therefrom.

City of Ontario Municipal Code
Sec. 5-29.04. Exterior noise standards.

(a) The following exterior noise standards (shown in **Table 4.14-11**), unless otherwise specifically indicated, shall apply to all properties within a designated noise zone.

Table 4.14-11
CITY OF ONTARIO EXTERIOR NOISE STANDARDS

Allowable Exterior Noise Level[1]		Allowed Equivalent Noise Level, L_{eq}[2]	
Noise Zone	**Type of Land Use**	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
I	Single-Family Residential	65 dBA	45 dBA
II	Multi-Family Residential, Mobile Home Parks	65 dBA	50 dBA
III	Commercial Property	65 dBA	60 dBA
IV	Residential Portion of Mixed Use	70 dBA	70 dBA
V	Manufacturing and Industrial, Other Uses	70 dBA	70 dBA

[1] If the ambient noise level exceeds the resulting standard, the ambient noise level shall be the standard.
[2] Measurements for compliance are made on the affected property pursuant to Section 5-29.15.
Source: Ontario Municipal Code Section 5-29.04(a)

(b) It is unlawful for any person at any location within the incorporated area of the City to create noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which noise causes the noise level, when measured at any location on any other property, to exceed either of the following:

(1) The noise standard for the applicable zone for any 15-minute period; and
(2) A maximum instantaneous (single instance) noise level equal to the value of the noise standard plus 20 dBA for any period of time (measured using A-weighted slow response).

(c) In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) The Noise Zone IV standard shall apply to that portion of residential property falling within 100 feet of a commercial property or use, if the noise originates from that commercial property or use.

(e) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

Sec. 5-29.06. Exemptions.

The following activities shall be exempted from the provisions of this chapter:

(a) Any activity conducted on public property, or on private property with the consent of the owner, by any public entity or its officers, employees, representatives, agents, subcontractors, permittees, licensees or lessees that the public entity has authorized are exempt from the provisions of this chapter. This includes, without limitation, sporting and recreational activities that are sponsored, co-sponsored, permitted or allowed by the City or any school district within the City's jurisdictional boundaries. This also includes, without limitation, occasional outdoor gatherings, public dances, shows or sporting and entertainment events, provided such events are conducted pursuant to an approval, authorization, contract, lease, permit or sublease by the appropriate public entity, specifically the planning commission or City Council;

(d) Noise sources associated with construction, repair, remodeling, demolition or grading of any real property. Such activities shall instead be subject to the provisions of Section 5-29.09;

(e) Noise sources associated with construction, repair, remodeling, demolition or grading of public rights-of-way or during authorized seismic surveys.

Sec. 5-29.09. Construction activity noise regulations.

(a) No person, while engaged in construction, remodeling, digging, grading, demolition or any other related building activity, shall operate any tool, equipment or machine in a manner that produces loud noise that disturbs a person of normal sensitivity who works or resides in the vicinity, or a Police or Code Enforcement Officer, on any weekday except between the hours of 7:00 a.m. and 6:00 p.m. or on Saturday or Sunday between the hours of 9:00 a.m. and 6:00 p.m.

(b) No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

(c) Exceptions.

1. The provisions of this section shall not apply to emergency construction work performed by a private party when authorized by the City Manager or his or her designee;
2. The maintenance, repair or improvement of any public work or facility by public employees, by any person or persons acting pursuant to a public works contract, or by any person or persons performing such work or pursuant to the direction of, or on

behalf of, any public agency; provided, however, this exception shall not apply to the City, or its employees, contractors or agents, unless:

i. The City Manager or a department head determines that the maintenance, repair or improvement is immediately necessary to maintain public services,
ii. The maintenance, repair or improvement is of a nature that cannot feasibly be conducted during normal business hours, or
iii. The City Council has approved project specifications, contract provisions, or an environmental document that specifically authorizes construction during hours of the day that would otherwise be prohibited pursuant to this section; and

3. Any construction that complies with the noise limits specified in Sections 5-29.04 or 5-29.05.

Sec. 5-29.11 Other public agency exceptions.

The provisions of this chapter shall not be construed to prohibit any work at different hours by or under the direction of any other public agency or public or private utility companies in cases of necessity or emergency.

City of Pomona Municipal Code
Sec. 18-305. Exemptions.

The following activities shall be exempted from this article:

(3) Noise sources associated with or vibration created by construction, repair, remodeling or grading of any real property or during authorized seismic surveys, provided such activities do not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a federal holiday, and provided the noise level created by such activities do not exceed the noise standard of 65 dB(A) plus the limits specified in section 18-311(b) as measured on residential property and any vibration created does not endanger the public health, welfare and safety.
(5) Noise sources associated with the maintenance of real property, provided such activities take place between the hours of 7:00 a.m. and 8:00 p.m. on any day except Sunday or between the hours of 9:00 a.m. and 8:00 p.m. on Sunday.

Sec. 18-309. Vibration.
Notwithstanding other sections of this article, it shall be unlawful for any person to create, maintain or cause any ground vibration which is perceptible without instruments at any point on any affected property adjoining the property on which the vibration source is located. For the purpose of this article, the perception threshold shall be presumed to be more than 0.05 in/sec RMS vertical velocity.

Sec. 18-311. Exterior noise standards.

(a) The following noise standards (reproduced herein as **Table 4.14-12**), unless otherwise specifically indicated, shall apply to all property within a designated noise zone:

Table 4.14.12
CITY OF POMONA EXTERIOR NOISE STANDARDS

Allowable Exterior Noise Level		Allowed Equivalent Noise Level, L_{eq}[2]	
Noise Zone	**Type of Land Use[1]**	**7:00 a.m. to 10:00 p.m.**	**10:00 p.m. to 7:00 a.m.**
I	Single-Family Residential Properties	60 dBA	50 dBA
II	Multi-Family Residential Properties	65 dBA	50 dBA
III	Commercial Properties	65 dBA	60 dBA
IV	Industrial Properties	70 dBA	70 dBA
V	High Traffic Corridors	70 dBA	70 dBA

[1] Defined by Pomona Municipal Code Section 18-130.
Source: Pomona Municipal Code Section 18-3111

(b) It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level, when measured on any other property, to exceed the following:
(1) The noise standard for a cumulative period of more than 30 minutes in any hour;
(2) The noise standard plus 5 dBA for a cumulative period of more than 15 minutes in any hour;
(3) The noise standard plus 10 dBA for a cumulative period of more than five minutes in any hour;
(4) The noise standard plus 15 dBA for a cumulative period of more than one minute in any hour; or
(5) The noise standard plus 20 dBA for any period of time.
(c) If the ambient noise level exceeds any of the noise limit categories in subsections (b)(1) through (4) of this section, the cumulative period applicable to such category shall be increased to reflect such ambient noise level. If the ambient noise level exceeds the noise limit category in subsection (b)(5) of this section, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.
(d) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

Sec. 18-312. Interior noise standards.

(a) The following noise standard (reproduced herein as **Table 4.14-13**), unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

Table 4.14-13
CITY OF POMONA INTERIOR NOISE STANDARDS

Noise Zone	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 p.m. to 7:00 a.m.	40 dBA
		7:00 a.m. to 10:00 p.m.	50 dBA

dBA = A-weighted decibel
Source: Pomona Municipal Code Section 18-312

Each of the noise limits specified shall be reduced by 5 dBA for impulse or simple tone noises or for noises consisting of speech or music; provided, however, that if the ambient noise level exceeds the resulting standard, the ambient shall be the standard.

(b) It shall be unlawful for any person at any location within the incorporated area of the City to create any noise or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such a person which causes the noise level, when measured within any other residential dwelling unit in any noise zone, to exceed the following:
  (1) The noise standard for a cumulative period of more than five minutes in any hour;
  (2) The noise standard plus 5 dBA for a cumulative period of more than one minute in any hour; or
  (3) The noise standard plus 10 dBA for any period of time.

(c) If the ambient noise level exceeds any of the limit categories in subsection (b)(1) or (2) of this section, the cumulative period applicable to such category shall be increased to reflect the maximum ambient noise level. If the ambient level exceeds the noise category in subsection (b)(3) of this section, the maximum allowable noise level under such category shall be increased to reflect the maximum ambient noise level.

(d) If the measurement location is on a boundary between two different noise zones, the lower noise level standard applicable to the noise zone shall apply.

(e) If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the same procedures specified in Section 18-311(e) shall be deemed proper to enforce this section.

Sec. 18-313. Schools, churches, libraries and health care institutions.

It shall be unlawful for any person to create a noise which causes a noise level at any school, hospital or similar health care institution, church, or library, while such is in use, to exceed the noise standards specified in Section 18-311 prescribed for the assigned noise zone in which the school, hospital, church or library is located or which noise level unreasonably interferes with the use of such institutions or which unreasonably disturbs or annoys patients in a hospital, convalescent home or other similar health care institution, provided conspicuous signs are displayed in three separate locations within 0.1 mile of the institution or facility indicating a quiet zone.

City of Rancho Cucamonga Municipal Code
17.66.050 Noise standards.

C. Exterior noise standards.
  1. It shall be unlawful for any person at any location within the City to create any noise or allow the creation of any noise on the property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on the property line of any other property to exceed the basic noise level as adjusted below:
    a. Basic noise level for a cumulative period of not more than 15 minutes in any one hour; or
    b. Basic noise level plus 5 dBA for a cumulative period of not more than ten minutes in any one hour; or
    c. Basic noise level plus 14 dBA for a cumulative period of not more than five minutes in any one hour; or
    d. Basic noise level plus 15 dBA at any time.
  2. If the measurement location is a boundary between two different noise zones, the lower noise level standard shall apply.

3. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be determined, the measured noise level obtained while the noise is in operation shall be compared directly to the allowable noise level standards as specified respective to the measurement's location, designated land use, and for the time of day the noise level is measured. The reasonableness of temporarily discontinuing the noise generation by an intruding noise source shall be determined by the planning director for the purpose of establishing the existing ambient noise level at the measurement location.

D. Special Exclusions
   4. Noise sources associated with, or vibration created by, construction, repair, remodeling, or grading of any real property or during authorized seismic surveys, provided said activities:
      a. When adjacent to a residential land use, school, church or similar type of use, the noise generating activity does not take place between the hours of 8:00 p.m. and 7:00 a.m. on weekdays, including Saturday, or at any time on Sunday or a national holiday, and provided noise levels created do not exceed the noise standard of 65 dBA when measured at the adjacent property line.
      b. When adjacent to a commercial or industrial use, the noise generating activity does not take place between the hours of 10:00 p.m. and 6:00 a.m. on weekdays, including Saturday and Sunday, and provided noise levels created do not exceed the noise standards of 70 dBA at the when measured at the adjacent property line.

F. Residential noise standards.
   1. Table 17.66.050-1 (reproduced herein as **Table 4.14-14**) includes the maximum noise limits in residential zones. These are the noise limits when measured at the adjacent residential property line (exterior) or within a neighboring home (interior).

Table 4.14-14
CITY OF RANCHO CUCAMONGA RESIDENTIAL NOISE LIMITS

Location of Measurement	Maximum Allowable	
	10:00 p.m. to 7:00 a.m.	7:00 a.m. to 10:00 p.m.
Exterior	60 dBA	65 dBA
Interior	45 dBA	50 dBA

dBA = A-weighted decibel
Source: Rancho Cucamonga Municipal Code Table 17.66.050-1

G. Commercial and office noise provisions. All operations and businesses shall be conducted to comply with the following standards:
   1. All commercial and office activities shall not create any noise that would exceed an exterior noise level of 65 dBA during the hours of 10:00 p.m. to 7:00 a.m. and 70 dBA during the hours of 7:00 a.m. to 10:00 p.m. when measured at the adjacent property line.
   2. Loading and unloading. No person shall cause the loading, unloading, opening, closing, or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 p.m. and 7:00 a.m., in a manner which would cause a noise disturbance to a residential area.
   3. Vehicle repairs and testing. No person shall cause or permit the repairing, rebuilding, modifying, or testing of any motor vehicle, motorcycle, or motorboat in such a manner as to increase a noise disturbance between the hours of 10:00 p.m. and 8:00 a.m. adjacent to a residential area.

H. Industrial noise provision included in Table 17.66.110-1 (Industrial Performance Standards).

17.66.110 Special industrial performance standards.

A. Purpose. The performance standards allow industrial uses to operate consistent with the overall characteristics of the land use category to provide for a healthy, safe, and pleasing environment in keeping with the nature and level of surrounding industrial activity. The performance standards contained in Table 17.66.110-1 (Industrial Performance Standards) are applied based on the zoning district as follows:
   1. Industrial Park (IP) Zoning District; Class A performance standards. The most restrictive of the performance standards to ensure a high-quality working environment and available sites for industrial and business firms whose functional and economic needs require protection from the adverse [effects] of noise, odors, vibration, glare, or high-intensity illumination, and other nuisances.
   2. General Industrial (GI) Zoning District; Class B performance standards. These standards are intended to provide for the broadest range of industrial activity while assuring a basic level environmental protection. It is the intent of the standards of this section to provide for uses whose operational needs may produce noise, vibration, particulate matter and air contaminants, odors, or humidity, heat, and glare which cannot be mitigated sufficiently to meet the Class A standards. The standards are so designed to protect uses on adjoining sites from effects which could adversely affect their functional and economic viability.
   3. Medium Impact/High Impact (MI/HI) and Heavy Industrial (HI) Zoning Districts; Class C performance standards. It is the intent of the standards of this section to make allowances for industrial uses whose associated processes produce noise, particulate matter and air contaminants, vibration, odor, humidity, heat, glare, or high-intensity illumination which would adversely affect the functional and economic viability of other uses. The standards, when combined with standards imposed by other governmental agencies, serve to provide basic health and safety protection for persons employed within or visiting the area.

Table 4.13-1
CITY OF RANCHO CUCAMONGA INDUSTRIAL PERFORMANCE STANDARDS

Class A	Class B	Class C
Noise Maximum		
70 dB (anywhere on lot) 65 dB (interior space of neighboring use on same lot) Noise caused by motor vehicles is exempted from this standard.	80 dB (anywhere on lot) 65 dB (at residential property line) Noise caused by motor vehicles and trains is exempted from this standard.	85 dB (lot line) 65 dB (at residential property line) Where a use occupies a lot abutting or separated by a street from a lot within the designated Class A or B performance standard or residential property, the performance standard of the abutting property shall apply at the common or facing lot line.

Class A	Class B	Class C
Vibration		
All uses shall be so operated as not to generate vibration discernible without instruments by the average person while on or beyond the lot upon which the source is located or within an adjoining enclosed space if more than one establishment occupies a structure. Vibration caused by motor vehicles, trains, and temporary construction or demolition work is exempted from this standard.	All uses shall be operated so as not to generate vibration discernible without instruments by the average persons beyond the lot upon which the source is located. Vibration caused by motor vehicles, trains, and temporary construction or demolition is exempted from this standard.	All uses shall be operated so as not to generate vibration discernible without instruments by the average person beyond 600 feet from where the source is located. Vibration caused by motor vehicles, trains, and temporary construction and demolition is exempted from this standard.

Source: Rancho Cucamonga Municipal Code Table 17.66.110-1

City of Rialto Municipal Code

9.50.030 - Prohibited acts.

A. It is unlawful for any person to engage in the following activities:

6. Creating excessive noise adjacent to any school, church, court or library while the same is in use, or adjacent to any hospital or care facility, which unreasonably interferes with the workings of such institution, or which disturbs or unduly annoys patients in the hospital, students in the school, users of the court or library, provided conspicuous signs are displayed in such streets indicating the presence of a school, institution of learning, church, court or hospital.

9.50.060 - Exemptions.

The following activities and noise sources shall be exempt from the provisions of this chapter:

K. Construction, operation, maintenance and repairs of equipment, apparatus or facilities of park and recreation departments, public work projects or essential public services and facilities, including trash collection and those of public utilities subject to the regulatory jurisdiction of the California Public Utilities Commission;

L. Construction, repair or excavation work performed pursuant to a valid written agreement with the City or any of its political subdivisions which agreement provides for noise mitigation measures;

O. Sounds generated in commercial and industrial zones that are necessary and incidental to the uses permitted therein.

9.50.070 - Disturbances from construction activity.

A. No person shall be engaged or employed, or cause any other person to be engaged or employed, in any work of construction, erection, alteration, repair, addition, movement, demolition, or improvement to any building or structure except within the hours provided for by subsection B of this section.

B. The permitted hours for such construction work are as follows:
   1. October 1st through April 30th (reproduced herein as **Table 4.14-16**).
   2. May 1st through September 30th (reproduced herein as **Table 4.14-17**).

Table 4.14-16
CITY OF RIALTO PERMITTED CONSTRUCTION HOURS (OCTOBER 1 THROUGH APRIL 30)

Day of Week	Permitted Hours for Construction Work
Monday through Friday	7:00 a.m. to 5:30 p.m.
Saturday	8:00 a.m. to 5:00 p.m.
Sunday	No permissible hours
State holidays	No permissible hours

Source: Rialto Municipal Code Section 9.50.070(B)(1)

Table 4.14-17
CITY OF RIALTO PERMITTED CONSTRUCTION HOURS (MAY 1 THROUGH SEPTEMBER 30)

Day of Week	Permitted Hours for Construction Work
Monday through Friday	6:00 a.m. to 7:00 p.m.
Saturday	8:00 a.m. to 5:00 p.m.
Sunday	No permissible hours
State holidays	No permissible hours

City of Upland Municipal Code

9.40.040 Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as shown in **Table 4.14-18**.

Table 4.14-18
CITY OF UPLAND BASE AMBIENT NOISE LEVELS

Decibels	Time	Zone Use
45 dBA	10:00 p.m. - 7:00 a.m.	Residential
55 dBA	7:00 a.m. - 10:00 p.m.	Residential
65 dBA	Anytime	Uses not specified
75 dBA	Anytime	Industrial and commercial

dBA = A-weighted decibels
Source: Upland Municipal Code Section 9.40.040

Actual decibel measurements exceeding the above levels at the times and within the zones corresponding thereto shall be employed as the base ambient noise level referred to in this chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels.

9.40.070 Maximum residential noise levels.

Exterior noise shall be measured on the exterior of any residential property, and no noise level shall exceed the following for the duration periods specified in **Table 4.14-19.**

Table 4.14-19
CITY OF UPLAND BASE MAXIMUM RESIDENTIAL NOISE LEVELS

Noise Level Exceeded	Maximum Duration Period
BANL	30 minutes in any hour
5 dBA above BANL	15 minutes in any hour
10 dBA above BANL	5 minutes in any hour
15 dBA above BANL	1 minute in any hour
20 dBA above BANL	Not permitted

dBA = A-weighted decibel; BANL = base ambient noise level
Source: Upland Municipal Code Section 9.40.070

9.40.070 Maximum residential noise levels.

Measured on the exterior of nonresidential properties, no noise level shall exceed the respective base ambient noise levels for nonresidential land uses as determined by development standards established by the regulating agency.

9.40.100 Noises prohibited—Unnecessary noise standard.

The following acts are declared to be loud, disturbing and unnecessary noises in violation of this chapter, but such enumeration shall not be deemed to be exclusive, namely:

A. Impact, Repetitive and Tone Noise Levels. In the event any offending noise consists primarily of impact noise, repetitive noise, or simple tone noise, each of the maximum permitted noise levels specified in Section 9.40.070 of this chapter shall be reduced by 5 dBA.

E. Machinery, Equipment, Fans and Air Conditioning. It is unlawful for any person to operate, cause to operate or permit the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus, or similar mechanical device in any manner so as to create any noise which would cause the noise level at the property line of any property to exceed the ambient noise base level by five dB(A).

K. Exhaust. It is unlawful for any person to discharge into the open air the exhaust of any steam engine, stationary internal combustion engine, motorboat, or motor driven vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.

L. Loading, Unloading, Opening Boxes. It is unlawful for any person to create any loud and excessive noise in connection with loading or unloading any vehicle or the opening and destruction of bales, boxes, crates, and containers.

M. Construction or Repairing of Buildings. It is unlawful for any person to engage in or permit the erection (including excavation), demolition, alteration or repair of any building other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, except in case of urgent necessity in the interest of public health and safety, and then only with a permit from the building inspector, which permit may be granted for a period not to exceed three days or less while the emergency continues, and which permit may be renewed for periods of three days or less while the emergency continues. If the building inspector should determine that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if he or she shall further determine that loss or inconvenience would result to any party in interest, he or she may grant permission for

such work to be done within the hours of 6:00 p.m. and 7:00 a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work.

P. Blowers. It is unlawful for any person to operate any noise-creating blower or power fan or any internal combustion engine, the operation of which causes noise due to the explosion of operating gases or fluids, unless the noise from such blower or fan is muffled and such engine is equipped with a muffler device sufficient to deaden such noise.

4.14.4 Thresholds of Significance

According to Appendix G, Section XIII, of the CEQA Guidelines, a noise impact from the project would be significant if the project would result in:

a) The generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
b) The generation of excessive groundborne vibration or groundborne noise levels
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the exposure of people residing or working in the project area to excessive noise levels.

Noise Impact Criteria

Noise thresholds applied by the various agencies located within the Chino Basin are, in and of themselves, cumulative impact thresholds. As such, a significant impact may occur if the noise thresholds of an agency are exceeded. The CEQA Guidelines do not define the levels at which permanent and temporary increases in ambient noise are considered "substantial." IEUA has not adopted thresholds for evaluating the significance of construction, on-site operational, and off-site traffic noise impacts. Therefore, as discussed in the following subsections, IEUA has chosen to utilize thresholds recommended by other public agencies to evaluate the significance of project noise impacts.

Construction Noise

Although local jurisdictions often restrict hours of construction to reduce construction noise impacts, they do not always adopt quantitative construction noise level limits. Jurisdictions with quantitative noise construction level limits set varying thresholds, which may depend on the urban or rural environment, daytime or nighttime hours, and mobile or stationary equipment. For the purposes of this analysis, the Federal Transit Administration (FTA) *Transit Noise and Vibration Impact Assessment Manual* criteria for construction noise are utilized. The FTA provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction. The daytime noise thresholds are 80 dBA L_{eq} for residential uses, 85 dBA L_{eq} for commercial uses, and 90 dBA L_{eq} for industrial uses for an 8-hour period. The nighttime noise thresholds are 70 dBA L_{eq} for residential uses, 85 dBA L_{eq} for commercial uses, and 90 dBA L_{eq} for industrial uses for an 8-hour period.[17]

For construction traffic-related noise, impacts would be significant if project-generated construction traffic would result in exposure of sensitive receivers to an unacceptable increase in noise levels. For purposes of this analysis, a significant impact would occur if project-related construction traffic increases the ambient noise environment of noise-sensitive locations by 3 dBA

[17] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).

or more (a barely perceptible increase) if the locations are subject to noise levels in excess of 60 CNEL for exterior areas or 45 CNEL for interior noise levels, or by 5 dBA or more (a readily perceptible increase) if the locations are not subject to noise levels in excess of the afore-mentioned standards.[18]

On-site Operational Noise

Most local jurisdictions throughout the Chino Basin have their own noise level standards, which are often contained in each jurisdiction's General Plan Noise Element, Noise Ordinance, and/or CEQA noise guidelines. As discussed above, despite IEUA's exemption from local zoning and building ordinances, this analysis broadly considers the potential for operational noise generated by individual projects that may be implemented under the proposed CBP to exceed the locally-applicable operational noise standards outlined in the general plans and noise ordinances of the cities and counties in the Chino Basin for purposes of full disclosure of potential impacts on the environment.

Off-site Traffic Noise

For traffic-related noise, impacts would be significant if project-generated traffic would result in exposure of sensitive receivers to an unacceptable increase in noise levels. For purposes of this analysis, a significant impact would occur if project-related traffic increases the ambient noise environment of noise-sensitive locations by 3 dBA or more (a barely perceptible increase) if the locations are subject to noise levels in excess of 60 CNEL for exterior areas or 45 CNEL for interior noise levels, or by 5 dBA or more (a readily perceptible increase) if the locations are not subject to noise levels in excess of the aforementioned standards.[19]

Noise Level Increases over Ambient Noise Levels

The operational and construction noise limits used in this analysis are set at reasonable levels at which a substantial noise level increase as compared to ambient noise levels would occur. Operational noise limits are lower than construction noise limits to account for the fact that permanent noise level increases associated with continuous operational noise sources typically result in adverse community reaction at lower magnitudes of increase than temporary noise level increases associated with construction activities that occur during daytime hours and do not affect sleep. Furthermore, these noise limits are tailored to specific land uses. For example, the noise limits for residential land uses are lower than those for commercial land uses. The difference in noise limits for each land use indicates that the noise limits inherently account for typical ambient noise levels associated with each land use. Therefore, an increase in ambient noise levels that exceeds these absolute limits would also be considered a substantial increase above ambient noise levels. As such, a separate evaluation of the magnitude of noise level increases over ambient noise levels would not provide additional analytical information regarding noise impacts and therefore is not included in this analysis.

[18] An exterior noise level of 60 CNEL is considered a "normally acceptable" noise level for single-family residential areas by the California Office of Planning and Research. In addition, California Code of Regulations, Title 24, Part 2 (2019 California Building Code), Chapter 12, Section 1206.4 requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room within a residential structure. (California Office of Planning and Research. 2017. *State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines*. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf [accessed September 2021]).

[19] An exterior noise level of 60 CNEL is considered a "normally acceptable" noise level for single-family residential areas by the California Office of Planning and Research. In addition, California Code of Regulations, Title 24, Part 2 (2019 California Building Code), Chapter 12, Section 1206.4 requires that interior noise levels attributable to exterior sources not exceed 45 CNEL in any habitable room within a residential structure. (California Office of Planning and Research. 2017. *State of California 2017 General Plan Guidelines – Appendix D: Noise Element Guidelines*. July 2017. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf [accessed September 2021]).

Vibration Criteria

The CEQA Guidelines do not define the levels at which groundborne vibration or groundborne noises are considered "excessive." In addition, IEUA has not adopted thresholds for evaluating the significance of vibration impacts. Therefore, the vibration thresholds used in this analysis to determine a potential impact to local land uses are based on information contained in Caltrans' (2020) *Transportation and Construction Vibration Guidance Manual* and the FTA (2018) *Transit Noise and Vibration Impact Assessment Manual*.[20] **Table 4.14-20** summarizes the vibration limits recommended by the FTA to avoid structural damage. If construction-related vibration exceeds these levels at nearby receivers, impacts would be potentially significant.

Table 4.14-20
FTA CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building/Structural Category	Vibration Level (in/sec PPV)
I. Reinforced-concrete, steel or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

PPV = peak particle velocity; in/sec = inches per second
Source: FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).

To evaluate vibration impacts related to human annoyance, the human response levels shown in **Table 4.14-2** and **Table 4.14-3** are utilized. As shown in **Table 4.14-2**, the vibration level threshold at which steady vibration sources are considered to be distinctly perceptible is 0.035 in/sec PPV. However, as shown in **Table 4.14-3**, the vibration level at which transient vibration sources (such as construction equipment) are considered to be distinctly perceptible is 0.24 in/sec PPV. As a point of reference for the purposes of this analysis, the distinctly perceptible vibration level of 0.24 in/sec PPV is utilized as a significance threshold for assessing daytime vibration impacts related to human annoyance. This threshold is appropriate because proposed CBP activities would result in transient vibration sources, such as construction activities (distinctly perceptible at 0.24 PPV), and would not result in steady state vibration (distinctly perceptible at 0.035 PPV). In addition, the FTA (2018) *Transit Noise and Vibration Impact Assessment Manual* recommends a threshold of 80 VdB for residences and buildings where people normally sleep, which is utilized as a significance threshold for assessing nighttime vibration impacts related to human annoyance.[21]

[20] Caltrans. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).
[21] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).

4.14.5 Potential Impacts

Methodology

Construction Noise

Construction noise was estimated using the Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM).[22] RCNM predicts construction noise levels for a variety of construction operations based on empirical data and the application of acoustical propagation formulas. RCNM provides reference noise levels for standard construction equipment, with an attenuation rate of 6 dBA per doubling of distance. **Table 4.14-21** summarizes typical noise levels generated by a variety of equipment used in construction activities.

Table 4.14-21
CONSTRUCTION EQUIPMENT NOISE LEVELS

Equipment	Noise Level at 50 Feet (dBA L_{max})	Equipment	Noise Level at 50 Feet (dBA L_{max})
Auger Drill Rig	85	Generator (25 kVA or less)	70
Backhoe	80	Generator (more than 25 kVA)	82
Chain Saw	85	Grader	85
Clam Shovel	93	Impact Pile Driver (diesel or drop)	95
Compactor (Ground)	80	Jackhammer	85
Compressor (Air)	80	Paver	85
Concrete Batch Plant	83	Pickup Truck	55
Concrete Mixer Truck	85	Pneumatic Tools	85
Concrete Pump	82	Pumps	77
Concrete Saw	90	Rock Drill	85
Crane (mobile or stationary)	85	Scraper	85
Dozer	85	Tractor	84
Dump Truck	84	Vacuum Street Sweeper	80
Excavator	85	Vibratory Concrete Mixer	80
Flat Bed Truck	84	Vibratory Pile Driver	95
Front End Loader	80	Welder	73

dBA = A-weighted decibel; kVA = kilovolt-amperes; Lmax = highest root mean squared sound pressure level within the sampling period
Source: Adapted from Federal Highway Administration (2006) Construction Noise Handbook

Because there is currently not sufficient detail to allow for the quantification of construction noise generated by each individual project to be implemented under the proposed CBP, construction noise levels were estimated using RCNM based on the anticipated combinations of construction equipment required for each project type as outlined in **Chapter 3, Project Description**, at distances of 25, 50, and 100 feet to evaluate the intensity of construction activities that would result in less than significant impacts related to construction noise. **Table 4.14-22** details the type and number of equipment modeled for each project type. Given the relatively small scale of

[22] FHWA. 2006. *FHWA Highway Construction Noise Handbook*. (FHWAHEP-06-015; DOT-VNTSC-FHWA-06-02). https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/ (accessed August 2021).

construction activities for each of project type and site limitations, it was assumed that only three pieces of construction equipment and would be operating simultaneously at an individual construction site. To provide a conservative estimate of impacts, the three loudest pieces of equipment for each phase were modeled. In addition, each construction scenario has its own noise characteristics; some would have higher continuous noise levels than others, and some may have higher instantaneous noise levels. The maximum hourly L_{eq} of each phase is determined by combining the L_{eq} contributions from each piece of equipment used in that scenario.[23]

Table 4.14-22
CONSTRUCTION EQUIPMENT FOR CBP PROJECT TYPES

Project Category[1]	Project Type	Construction Equipment
1	Injection/Extraction/Monitoring Wells	Drill Rig, Generator, Pump
2	Pipelines/Turnouts	Excavator, Compactor, Pavement Cutter
3	Reservoirs/Pump Stations	Crane, Backhoe, Front Loader
4	AWPF/Wellhead Treatment Facilities	Grader, Loader, Compactor

[1] Project Category 3, which involves projects expanding the safe storage capacity within the Chino Basin, would not require the construction of additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate daytime construction noise. Therefore, construction noise impacts associated with this project category are not evaluated quantitatively.

Construction equipment operate in either a stationary or mobile mode during a construction noise assessment. As a rule, stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment, such as bull dozers, graders, and loaders, move around the construction site with power applied in cyclic fashion.[24] Noise impacts from stationary equipment are assessed from the center of the equipment, while noise impacts from mobile construction equipment are assessed from the center of the equipment activity area (e.g., construction site). To provide a conservative analysis for noise impacts, it was assumed that diesel engines would power all construction equipment. Variation in power adds additional complexity in characterizing the noise source level from construction equipment. Power variation is accounted for by describing the noise at a reference distance from the equipment operating at full power and adjusting it based on the duty cycle, or percent of operational time, of the activity to determine the L_{eq} of the operation.[25] RCNM calculations are included in Appendix 11 to Volume 2 of this DPEIR.

On-Site Operational Noise

Individual projects that may be implemented under the proposed CBP would be located in multiple jurisdictions with varying noise level standards and restrictions. In addition, project-specific details regarding equipment make and model, quantity, and location are not available at this time. As a result, the analysis does not use specific quantitative noise estimates to evaluate the on-site operational noise impacts of the CBP but rather generally discusses the relationship between the types of noise levels likely to be produced during individual projects under the proposed CBP and local jurisdictions' noise level standards.

[23] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).
[24] Ibid.
[25] Ibid.

Off-site Traffic Noise

Individual projects implemented under the proposed CBP may generate additional vehicle trips associated with operation and maintenance activities, which would increase existing traffic volumes and associated noise levels on roadways throughout the Chino Basin. Project-specific details regarding the quantity, frequency, and location of these trips are not available at this time. As a result, the analysis does not use specific quantitative noise estimates to evaluate the off-site roadway noise impacts of the CBP but rather generally discusses the types of noise levels likely to be produced by additional vehicle trips associated with individual projects under the proposed CBP.

Vibration

The individual projects that may be implemented under the proposed CBP do not include any substantial vibration sources associated with operation, such as the installation of stationary vibration-generating equipment or railroad tracks. Accordingly, construction activities have the greatest potential to generate groundborne vibration affecting nearby receivers, especially during site preparation and grading of construction sites. Construction vibration estimates are based on vibration levels and equations developed by Caltrans and the FTA.[26,27] **Table 4.14-23** shows vibration levels used in the assessment of construction vibration for various pieces of typical construction equipment expected to be used during construction of projects proposed under the CBP.

Table 4.14-23
VIBRATION LEVELS MEASURED DURING CONSTRUCTION ACTIVITIES

Equipment	PPV at 25 feet (in/sec)	VdB at 25 feet
Large Bull Dozer	0.089	87
Small Bull Dozer	0.003	58
Drill Rig[1]	0.089	87
Loaded Truck	0.076	83
Vibratory Roller	0.21	94
Jackhammer	0.035	79

PPV = peak particle velocity; in/sec = inches per second; VdB = vibration decibels
[1] Vibration levels from caisson drilling were used as a proxy for drill rigs.
Source: FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).

Impact Analysis

This section evaluates the potential noise and vibration impacts associated with the proposed CBP.

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

[26] Caltrans. 2020. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). September. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf (accessed August 2021).
[27] FTA. 2018. *Transit Noise and Vibration Impact Assessment Manual.* https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed October 2021).

Daytime Construction Noise

Construction of individual projects under the proposed CBP would require the use of heavy-duty construction equipment, which would result in a temporary increase in ambient noise levels at sensitive receivers near individual construction sites. **Table 4.14-24** summarizes estimated construction noise levels for each project type proposed under the CBP at distances of 25, 50, 100, and 225 feet from the center of individual construction sites. The following subsections evaluate the potential for each of the four project categories to result in significant daytime construction noise impacts as compared to the FTA daytime construction noise thresholds of 80 dBA L_{eq} for residential uses, 85 dBA L_{eq} for commercial uses, and 90 dBA L_{eq} for industrial uses for an 8-hour period.

Table 4.14-24
ESTIMATED CONSTRUCTION NOISE LEVELS FOR CBP PROJECT TYPES

Project Category[1]	Project Type	Equipment	Noise Levels (dBA L_{eq})			
			25 Feet from Center of Construction Activities	50 Feet from Center of Construction Activities	100 Feet from Center of Construction Activities	225 Feet from Center of Construction Activities
1	Injection/ Extraction/ Monitoring Wells	Drill Rig, Generator, Pump	88	82	76	69
2	Pipelines/ Turnouts	Excavator, Compactor, Pavement Cutter	90	84	78	71
2	Reservoirs/ Pump Stations	Crane, Backhoe, Front Loader	85	79	73	66
4	AWPF/ Wellhead Treatment Facilities	Grader, Loader, Compactor	89	83	77	70

dBA = A-weighted decibel; L_{eq} = equivalent noise level
[1] Project Category 3, which involves expanding the safe storage capacity within the Chino Basin, would not require the construction of additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate daytime construction noise. Therefore, construction noise impacts associated with this project category are not evaluated quantitatively.
See Appendix NOI for RCNM output files.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

As described in **Chapter 3, Project Description**, construction of individual projects under Project Category 1, such as injection, extraction, and monitoring wells, could require the simultaneous use of a drill rig, generator, and pump. Use of this equipment would result in a temporary increase in ambient noise levels at sensitive receivers near individual construction sites. As shown in **Table 4.14-24**, construction activities for injection, extraction, and monitoring wells would generate noise levels in excess of the 80 dBA L_{eq} threshold for residential uses at distances less than 100 feet and the 85 dBA L_{eq} threshold for commercial land uses at distances of less than 50 feet but not in excess of the 90 dBA L_{eq} threshold for industrial uses. Therefore, if residential land uses are located within 100 feet of individual construction sites or if commercial land uses are located within 50 feet of individual construction sites, then individual projects under Project Category 1 would result in a potentially significant daytime construction noise impact. Therefore, implementation of

mitigation measure (MMs) **NOI-1** through **NOI-3** would be required, which would reduce the impact to a less than significant level.

Construction of individual projects under Project Category 1 would also temporarily generate additional vehicle trips in the Chino Basin associated with construction workers traveling to and from construction sites, material deliveries, cement trucks, and soil material import/export. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each well site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 1 would increase off-site traffic noise levels by 3 dBA. Therefore, construction traffic noise impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

As described in **Chapter 3, Project Description**, construction of individual pipeline and turnout projects under Project Category 2 could require the simultaneous use of an excavator, compactor, and pavement cutter. Use of this equipment would result in a temporary increase in ambient noise levels at sensitive receivers near individual construction sites. As shown in **Table 4.14-24**, construction activities for pipelines and turnouts would generate noise levels in excess of the 80 dBA L_{eq} threshold for residential uses at distances of less than 100 feet and in excess of the 85 dBA L_{eq} threshold for commercial land uses at distances of less than 50 feet but not in excess of the 90 dBA L_{eq} threshold for industrial land uses. Therefore, if residential land uses are located within 100 feet of individual construction sites or if commercial land uses are located within 50 feet of individual construction sites, then individual pipeline and turnout projects under Project Category 2 would result in a potentially significant daytime construction noise impact. Therefore, implementation of MMs **NOI-1** through **NOI-3** would be required, which would reduce the impact to a less than significant level.

As described in **Chapter 3, Project Description**, construction of individual reservoir and pump station projects under Project Category 2 could require the simultaneous use of a crane, backhoe, and front loader. Use of this equipment would result in a temporary increase in ambient noise levels at sensitive receivers near individual construction sites. As shown in **Table 4.14-24**, construction activities for reservoirs and pump stations would generate noise levels in excess of the 80 dBA L_{eq} threshold for residential uses at distances less than 50 feet but not in excess of the 85 dBA L_{eq} threshold for commercial land uses or the 90 dBA L_{eq} threshold for industrial land uses. Therefore, if residential land uses are located within 50 feet of individual construction sites, then individual reservoir and pump station projects under Project Category 2 would result in a potentially significant daytime construction noise impact. Therefore, implementation of MMs **NOI-1** through **NOI-3** would be required, which would reduce impacts to a less than significant level.

Construction of individual projects under Project Category 2 would also temporarily generate additional vehicle trips in the Chino Basin associated with construction workers traveling to and from construction sites, material deliveries, concrete trucks, water trucks, and soil material import/export. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each well site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 2 would increase off-site traffic noise levels by 3 dBA. Therefore, construction traffic noise impacts would be less than significant.

Project Category 3: Groundwater Storage Increase

Expanding the safe storage capacity within the Chino Basin would not require the construction of additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate daytime construction noise. Therefore, no additional daytime construction noise impacts would occur as a result of Project Category 3, and no mitigation is required.

Project Category 4: AWPF and Other Water Treatment Facilities

As described in **Chapter 3, Project Description**, construction of individual projects under Project Category 4 could require the simultaneous use of a motor grader, loader, and compactor. Use of this equipment would result in a temporary increase in ambient noise levels at sensitive receivers near individual construction sites. As shown above in **Table 4.14-24**, construction activities for the AWPF and wellhead treatment facilities would generate noise levels in excess of 80 dBA L_{eq} threshold for residential land uses at distances less than 100 feet and the 85 dBA L_{eq} threshold for commercial land uses at distances less than 50 feet but not in excess of the 90 dBA L_{eq} threshold for industrial uses. No residential or commercial land uses are located within these distances of the AWPF; therefore, no daytime construction noise impact would occur for this project component. However, if residential land uses are located within 100 feet of individual wellhead treatment facility construction sites or if commercial land uses are located within 50 feet of individual wellhead treatment facility construction sites, then these projects would result in a potentially significant daytime construction noise impact. Therefore, implementation of MMs **NOI-1** through **NOI-3** would be required, which would reduce the impact to a less than significant level.

Construction of individual projects under Project Category 4 would also temporarily generate additional vehicle trips in the Chino Basin associated with construction workers traveling to and from construction sites, material deliveries, concrete trucks, water trucks, and soil material import/export. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each well site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 4 would increase off-site traffic noise levels by 3 dBA. Therefore, construction traffic noise impacts would be less than significant.

Combined Project Categories

Construction noise attenuates rapidly with distance, especially in urban environments with intervening structures and noise sources, and construction noise generated at one CBP construction site would generally not affect the same receivers as construction noise generated at another CBP construction site if the construction sites are located more than 200 feet apart from each other. Although multiple individual projects under the CBP may be constructed simultaneously, each project under construction would not be located in such close proximity to other projects under construction. Thus, it is unlikely that the combined effects of individual projects under all project categories would result in greater construction noise impacts that those evaluated above for each project category. No additional daytime construction noise impacts would occur as a result of the combined project categories.

Nighttime Construction Noise

The following subsections evaluate the potential for each of the four project categories to result in significant nighttime construction noise impacts as compared to the FTA nighttime construction noise thresholds of 70 dBA L_{eq} for residential uses, 85 dBA L_{eq} for commercial uses, and 90 dBA L_{eq} for industrial uses for an 8-hour period based on the estimated construction noise levels for each project category summarized in **Table 4.14-24** above.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
As described in **Chapter 3, Project Description**, the installation of injection, extraction, and monitoring wells would require 24-hour, seven-days-a-week drilling activities for approximately 15 to 20 days, which would result in a temporary increase in nighttime ambient noise levels at sensitive receivers near individual construction sites. As shown above in **Table 4.14-24**, construction activities for injection, extraction, and monitoring wells would generate noise levels in excess of the 70 dBA L_{eq} threshold for residential land uses at distances less than 225 feet and the 85 dBA L_{eq} threshold for commercial land uses at distances of less than 50 feet but not in excess of the 90 dBA L_{eq} threshold for industrial uses. Therefore, if residential land uses are located within 225 feet of individual construction sites or if commercial land uses are located within 50 feet of individual construction sites where nighttime well drilling activities would occur, then individual projects under Project Category 1 would result in a potentially significant nighttime construction noise impact. Therefore, implementation of MMs **NOI-1** through **NOI-3** would be required, which would reduce the impact to a less than significant level.

Project Category 2: Conveyance Facilities and Ancillary Facilities
Construction activities associated with individual projects under Project Category 2, such as conveyance pipelines, reservoirs, turnouts, and pump stations, are not anticipated to require nighttime construction activities. Therefore, these projects would result in no nighttime construction noise impacts.

Project Category 3: Groundwater Storage Increase
Expanding the safe storage capacity within the Chino Basin would not require the construction of additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate nighttime construction noise. Therefore, no additional nighttime construction noise impacts would occur as a result of Project Category 3.

Project Category 4: AWPF and Other Water Treatment Facilities
Construction activities associated with individual projects under Project Category 4, such as the AWPF and wellhead treatment facilities, are not anticipated to require nighttime construction activities. Therefore, these projects would result in no nighttime construction noise impacts.

Combined Project Categories
Only Project Category 1 is anticipated to require nighttime construction activities; therefore, the environmental impacts of the combined project categories would be the same as those identified above for Project Category 1. No additional combined nighttime construction noise impacts would occur.

Operational Noise

The following subsections evaluate the potential for each of the four project categories to result in significant on-site operational noise impacts in light of the operational noise limits established by local jurisdictions, which are summarized in **4.14.3, Regulatory Setting**, above.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
Individual projects under Project Category 1 could generate on-site operational noise, depending on the type of well and equipment used. Injection and monitoring wells typically do not include on-site equipment, such as pumps, that would produce noise. Therefore, these projects would not result in on-site operational noise impacts at nearby sensitive receivers. Extraction wells are typically equipped with pumps, which may be submersible or aboveground. Submersible pumps are located within the well and generally do not produce audible noise levels at the surface.

However, aboveground pumps would have the potential to result in a substantial permanent increase in ambient noise levels at nearby sensitive receivers, if present, depending on the equipment type, whether the pump is enclosed in a structure, the distance between the pump and nearby sensitive receivers, and the local jurisdiction's noise standards. Therefore, operational noise levels associated with extraction wells with aboveground pumps may exceed the operational noise thresholds for sensitive land uses established by the local jurisdiction, which are outlined under **4.14.3, Regulatory Setting**. As a result, implementation of Mitigation Measure **NOI-4** would be required for all extraction wells with aboveground pumps, which would reduce impacts to a less than significant level.

Project Category 2: Conveyance Facilities and Ancillary Facilities

Individual projects under Project Category 2 could generate on-site operational noise, depending on the project type and equipment used. Pipelines, turnouts, and in-conduit hydropower facilities would be located underground and would not include noise-generating components. In addition, although reservoirs would likely be located aboveground, these would not include noise-generating components. Therefore, these project types would not result in on-site operational noise impacts at nearby sensitive receivers. However, pump stations would have the potential to result in a substantial permanent increase in ambient noise levels at nearby sensitive receivers, if present, depending on the equipment type, number of pumps, whether the pump is enclosed in a structure, the distance between the pump and nearby sensitive receivers, and the local jurisdiction's noise standards. Therefore, operational noise levels associated with pump stations may exceed the operational noise thresholds for sensitive land uses established by the local jurisdiction, which are outlined under **4.14.3, Regulatory Setting**. As a result, implementation of MM **NOI-4** would be required for all pump stations, which would reduce impacts to a less than significant level.

Project Category 3: Groundwater Storage Increase

Expanding the safe storage capacity within the Chino Basin would not require additional infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would generate on-site operational noise. Therefore, no additional on-site operational noise impacts would occur as a result of Project Category 3, and no mitigation is required.

Project Category 4: AWPF and Other Water Treatment Facilities

Individual projects under Project Category 4 would have the potential to generate on-site operational noise associated with heating, ventilation, and air conditioning equipment, exhaust fans, pumps, treatment equipment, and other sources. As a result, these projects would have the potential to result in a substantial permanent increase in ambient noise levels at nearby sensitive receivers, if present, depending on the equipment type, number of noise-generating equipment, whether noise-generating equipment is enclosed in a structure, the distance between noise-generating equipment and nearby sensitive receivers, and the local jurisdiction's noise standards. As discussed under **4.14.2, Environmental Setting: Noise and Vibration**, the AWPF would be located at RP-4, which is not located within 1,000 feet of sensitive receivers. Therefore, operation of the AWPF would not generate a substantial permanent increase in ambient noise levels. However, operational noise levels associated with wellhead treatment facilities under Project Category 4 may exceed the operational noise thresholds for sensitive land uses established by the local jurisdiction, which are outlined under **4.14.3, Regulatory Setting**. As a result, implementation of MM **NOI-4** would be required for wellhead treatment facilities (but not the AWPF), which would reduce impacts to a less than significant level.

Combined Project Categories

Operational noise associated with an individual project with noise-generating components (i.e., extraction wells, pump stations, and wellhead treatment facilities) could combine with operational noise generated by other individual projects to result in higher operational noise levels at nearby sensitive receivers than each individual project alone if multiple projects are located within 1,000 feet of the same sensitive receivers. CBP facilities would be distributed throughout the Chino Basin, which would reduce the potential for operational noise generated by multiple individual projects to impact the same sensitive receivers. Nevertheless, individual CBP projects implemented within 1,000 feet of other individual CBP projects would have the potential to result in a substantial combined permanent increase in ambient noise levels at nearby sensitive receivers, if present, depending on the equipment type, number of noise-generating equipment, whether noise-generating equipment is enclosed in a structure, the distance between noise-generating equipment and nearby sensitive receivers, the distance between individual CBP projects, and the local jurisdiction's noise standards. Therefore, combined operational noise levels associated with individual projects under all project categories may exceed the operational noise thresholds for sensitive land uses established by the local jurisdiction, which are outlined under **4.14.3, Regulatory Setting**. As a result, implementation of MM **NOI-4** would be required for all CBP projects with noise-generating components (i.e., extraction wells, pump stations, and wellhead treatment facilities) located within 1,000 feet of each other, which would reduce impacts to a less than significant level.

Off-site Traffic Noise

As discussed above under **4.14.2, Environmental Setting: Noise and Vibration**, a doubling of traffic volumes would increase roadway noise by 3 dBA. Local roadways have the greatest potential to experience roadway noise impacts because low existing traffic volumes result in lower ambient noise levels, which increases the potential for noise generated by program-related traffic volumes to be more perceptible. The following subsections evaluate the potential for each of the four project categories to result in significant off-site operational traffic noise impacts.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

Individual projects under Project Category 1 would require minimal operation and maintenance activities once complete. Maintenance of injection, extraction, and monitoring wells typically occurs on a daily to weekly basis; therefore, each well would require approximately one vehicle trip per day for maintenance. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each well site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 1 would increase off-site traffic noise levels by 3 dBA. Therefore, off-site traffic noise impacts would be less than significant, and no mitigation is required.

Project Category 2: Conveyance Facilities and Ancillary Facilities

Individual projects under Project Category 2 would require minimal operation and maintenance activities once constructed. Maintenance of pipelines and turnouts typically occurs on a monthly to semi-annual basis, and maintenance of reservoirs and pump stations typically occurs on a daily to weekly basis. Therefore, each conveyance and ancillary facility would require up to approximately one vehicle trip per day for maintenance. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each conveyance or ancillary facility site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 2 would increase off-site traffic noise levels by

3 dBA. Therefore, off-site traffic noise impacts would be less than significant, and no mitigation is required.

Project Category 3: Groundwater Storage Increase

Expanding the safe storage capacity within the Chino Basin would not require additional operation and maintenance activities other than those analyzed under Project Categories 1, 2, and 4 that would generate new vehicle trips. Therefore, no additional off-site traffic noise impacts would occur as a result of Project Category 3, and no mitigation is required.

Project Category 4: AWPF and Other Water Treatment Facilities

Individual projects under Project Category 4 would require minimal operation and maintenance activities once complete. Maintenance of water treatment facilities typically occurs on a daily basis. Depending on the number of employees traveling to the water treatment facilities, including the AWPF, on a daily basis there is potential for 8 roundtrips to these sites each day. These additional traffic volumes would be dispersed throughout the Chino Basin on local and regional roadways in proximity to each water treatment facility site. The limited number of trips would not have the potential to double traffic volumes even on low-volume local roadways. Thus, it is unlikely that individual projects implemented under Project Category 4 would increase off-site traffic noise levels by 3 dBA. Therefore, off-site operational traffic noise impacts would be less than significant, and no mitigation is required.

Combined Project Categories

Operation and maintenance of individual projects implemented together under all project categories would result in a minimal overall increase in traffic volumes on local and regional roadways as compared to existing conditions. CBP facilities would be distributed throughout the Chino Basin, which would minimize the potential for multiple individual projects to increase traffic volumes on the same roadways. Furthermore, operation and maintenance activities for multiple individual projects would likely be conducted as part of a single maintenance route, which would reduce the overall number of trips required for operation and maintenance. Thus, it is unlikely that the combined effects of individual projects under all project categories would have the potential to double traffic volumes even on low-volume local roadways. As a result, it is unlikely that the CBP would increase off-site traffic noise levels by 3 dBA. Therefore, off-site traffic noise impacts would be less than significant, and no mitigation is required.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-1 ***The following construction noise control practices shall be implemented at all CBP construction sites:***

- ***Construction staging and activities shall be located in areas as far as practicable from sensitive receivers or in areas where receivers can be shielded from construction noise.***
- ***Whenever practicable, construction activities shall be scheduled so as to avoid operating several pieces of equipment simultaneously.***
- ***All heavy-duty stationary construction equipment shall be placed so that emitted noise is directed away from the nearest sensitive receivers.***
- ***IEUA shall provide a non-automated telephone number for local residents to call to submit complaints associated with construction noise during all phases of construction. IEUA shall maintain a log of complaints and shall address complaints to minimize noise issues for neighbors.***

NOI-2 ***Project-level construction noise studies shall be conducted for the following project activities that would exceed the screening criteria for a less than significant impact:***

- ***All projects under Project Category 1, if the center of the construction site would be located within 225 feet of residential land uses and/or within 50 feet of commercial land uses***
- ***All projects under Project Category 2, if the center of the construction site would be located within 100 feet of residential and/or commercial land uses***
- ***Wellhead treatment projects under Project Category 4, if the center of the construction site would be located within 100 feet of residential land uses and/or within 50 feet of commercial land uses***

Such noise studies shall identify the existing ambient noise levels, characterize the nearest sensitive receivers, estimate the noise levels receivers will experience during construction of individual projects, compare estimated noise levels to the daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual, outline measures that may be used to reduce noise levels, and determine the amount of noise reduction that would occur with implementation of these measures. If the individual project would be constructed concurrently with development projects located within a 0.5-mile radius of the individual project location, the noise study shall also consider the cumulative impact of construction noise on sensitive receivers. If the project-level noise study concludes that noise reduction measures are required, Mitigation Measure NOI-3 shall be implemented.

NOI-3 ***If the results of the project-level construction noise study prepared under Mitigation Measure NOI-2 determine noise reduction measures are required, noise reduction measures shall be implemented to reduce noise levels to at or below the daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual. Construction noise reduction measures may include, but would not be limited to, the use of mufflers, sound blankets/barriers, and/or enclosures; scheduling construction activities to minimize simultaneous operation of noise-producing equipment; and/or temporary accommodations for affected residents. If applicable, construction noise reduction measures shall be implemented to reduce cumulative noise levels to local jurisdiction or FTA (2018) construction noise criteria. If project-level construction noise cannot be reduced to at or below the local jurisdiction acceptable noise levels or daytime and/or nighttime construction noise criteria in the FTA (2018) Transit Noise and Vibration Impact Assessment Manual, IEUA shall seek a variance from the local noise ordinance prior to initiating construction.***

NOI-4 ***Prior to the commencement of construction activities for individual projects with noise-generating components (i.e., extraction wells, pump stations, and wellhead treatment facilities) where sensitive receivers are located within 1,000 feet of the individual project sites, project-level operational noise studies shall be conducted. Such noise studies shall identify the ambient noise levels, characterize the nearest sensitive receivers, estimate the noise levels receivers will experience during operation of individual projects during the operational period, and compare estimated noise levels to the noise level standards of the applicable jurisdiction. If one or more other individual CBP projects with noise-generating components are proposed to be located within 1,000 feet of the individual project under evaluation, the operational noise study shall also evaluate the combined operational noise levels generated by all CBP projects within 1,000 feet of the individual project site. The operational noise study shall also outline measures that shall be implemented to reduce noise levels below the local jurisdiction's noise standards and demonstrate how implementation of these noise reduction measures would reduce noise levels below the applicable standards. Noise reduction measures may include, but would not be limited to, alternative site design, alternative orientation of noise sources, alternative equipment selection, use of sound enclosures, and construction of berms and/or barriers. Noise reduction measures shall be implemented to reduce noise levels to***

the noise level standards of the applicable jurisdiction. If project-level operational noise cannot be reduced to at or below the local jurisdiction acceptable noise levels, IEUA shall either (1) select an alternative site location that avoids exceeding the noise level standards of the applicable jurisdiction at the nearest sensitive receptor, or (2) undergo subsequent CEQA documentation to assess potential site-specific noise impacts from locating a future facility in close proximity to sensitive receptors.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

*Cumulative Measures: Implementation of MMs **NOI-1 through NOI-4** is required.*

The geographic scope for cumulative noise impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed CBP. This geographic scope is appropriate for noise because the proposed program's noise impacts are localized and site-specific. Beyond this distance, typical construction and operational noise would be indistinguishable from the background noise level due to distance attenuation and interference from environmental conditions (e.g., topography and air disturbance).

Construction Noise

If concurrent construction activities occur in close proximity to proposed CBP activities, combined construction noise would have the potential to impact the same sensitive receivers and result in cumulative construction noise levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction noise impacts may be potentially significant. Nevertheless, per MMs **NOI-2** and **NOI-3**, individual projects with the potential to generate construction noise in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction noise studies and incorporate noise reduction measures to reduce noise levels to the FTA daytime and nighttime construction noise standards. As a result, regardless of whether a significant cumulative construction noise impact is occurring, the proposed CBP's noise contribution would not be cumulatively considerable with incorporation of MMs **NOI-2** and **NOI-3**.

On-site Operational Noise

Depending on the specific locations of individual projects that may be implemented under the proposed CBP, it is possible that cumulative development is currently resulting in a significant cumulative operational noise impact if operational noise exceeds the applicable jurisdiction's noise level standards at sensitive receivers. Therefore, cumulative operational noise impacts may be potentially significant. Nevertheless, per MM **NOI-4**, individual projects with the potential to generate on-site operational noise in proximity to sensitive receivers would be required to complete project-level operational noise studies and incorporate noise reduction measures to reduce noise levels to the noise level standards of the applicable jurisdiction. As a result, regardless of whether a significant cumulative operational noise impact is occurring, the proposed CBP's noise contribution would not be cumulatively considerable with incorporation of MM **NOI-4**.

Off-site Traffic Noise

Cumulative growth in the Chino Basin would result in increased traffic volumes on local and regional roadways. However, as discussed above, due to the relatively low number of anticipated operation and maintenance trips associated with individual CBP projects, impacts related to off-site roadway noise would be incremental and likely inaudible; therefore, the proposed program would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise.

Level of Significance After Mitigation: Less than Significant

(b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration

Construction activities associated with the proposed CBP would include activities such as grading, excavation, and drilling, which would potentially require the use of equipment that may generate substantial levels of vibration, such as bull dozers, loaded trucks, bore/drill rigs, vibratory rollers, and jackhammers. Persons residing and working in an area located in proximity to a construction site could be exposed to excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Ground vibrations from construction activities can also reach levels that can damage structures if conducted in too-close proximity to structures.

As shown in **Table 4.14-23**, the use of vibration-generating construction equipment would generate vibration levels ranging from 0.003 to 0.089 in/sec PPV, or 58 to 94 VdB, at a distance of 25 feet. **Table 4.14-25** summarizes the minimum distances at which vibration generated by construction equipment would attenuate to less than significant levels at various receivers. CBP construction activities utilizing equipment at the minimum distances shown in **Table 4.14-25** would have a less than significant construction vibration impact.

The following subsections evaluate the potential for each of the four project categories to result in significant construction vibration impacts.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
Construction of individual projects under Project Category 1 would require the use of drill rigs, loaded trucks, and potentially jackhammers. At this time, individual projects that may be implemented under Project Category 1 do not have sufficient detail to allow project-level analysis of vibration impacts during construction. However, if historic sites, structures, or vibration-sensitive land uses are located within the minimum distances for drill rigs shown in **Table 4.14-25**, then individual projects under Project Category 1 would result in a potentially significant daytime construction vibration impact. In addition, if nighttime well drilling occurs within 55 feet of land uses where people sleep, then individual projects under Project Category 1 would also result in a potentially significant nighttime construction vibration impact. Therefore, implementation of MMs **NOI-5** through **NOI-7** would be required, which would reduce impacts to a less than significant level.

Table 4.14-25
VIBRATION LEVEL CONTOURS DURING CONSTRUCTION ACTIVITIES

Equipment	Minimum Distance to Receiving Land Use for a Less Than Significant Impact (feet)			
	Historic Sites[1]	All Other Structures[2]	Daytime Vibration-Sensitive Land Uses[3]	Nighttime Vibration-Sensitive Land Uses[4]
Large Bull Dozer	20	15	10	55
Small Bull Dozer	5	5	5	5
Loaded Truck	20	10	10	35
Drill Rig[5]	20	15	15	55
Vibratory Roller	40	30	25	110
Jackhammer	10	5	5	25

PPV = peak particle velocity in inches per second; VdB = vibration decibels
Note: Distances are rounded to the nearest 5 feet.
[1] Distance to the 0.12 in/sec PPV contour (FTA construction vibration damage criteria for buildings extremely susceptible to vibration damage, as shown in **Table 4.14-23**). **Table 4.14-23**
[2] Distance to the 0.2 in/sec PPV contour (FTA construction vibration damage criteria for non-engineered timber and masonry buildings, as shown in **Table 4.14-23**).
[3] Distance to the 0.24 in/sec PPV contour (the level at which vibration associated with transient vibration sources is distinctly perceptible, as shown in **Table 4.14-23**).
[4] Distance to 80 VdB contour (the recommended threshold to evaluate human annoyance impacts at residences and buildings where people normally sleep).
[5] Caisson drilling was used as a proxy for drill rigs.

Project Category 2: Conveyance Facilities and Ancillary Facilities

Construction of individual projects under Project Category 2 would require the use of rollers, loaded trucks, and potentially jackhammers. At this time, individual projects that may be implemented under Project Category 2 do not have sufficient detail to allow project-level analysis of vibration impacts during construction. However, if historic sites, structures, or sensitive receivers are located within the minimum distances for rollers, loaded trucks, and jackhammers shown in **Table 4.14-25**, then individual projects under Project Category 2 would result in a potentially significant construction vibration impact. Therefore, implementation of MMs **NOI-5** through **NOI-7** would be required, which would reduce impacts to a less than significant level.

Project Category 3: Groundwater Storage Increase

Expanding the safe storage capacity within the Chino Basin would not require construction of infrastructure other than that analyzed under Project Categories 1, 2, and 4 that would require the use of heavy-duty, vibration-generating equipment. Therefore, no additional construction vibration impacts would occur as a result of Project Category 3.

Project Category 4: AWPF and Other Water Treatment Facilities

Construction of individual projects under Project Category 4 would require the use of bull dozers, loaded trucks, and potentially jackhammers. As discussed in **4.14.2, Environmental Setting: Noise and Vibration**, the AWPF would be located at RP-4, which is not located within 1,000 feet of sensitive receivers. Therefore, construction activities at the AWPF would not generate substantial vibration that would result in human annoyance. However, the use of large bull dozers for construction activities associated with the AWPF at RP-4 may occur within 15 feet of the nearest off-site structure to the west of RP-4, which therefore would have the potential to result in structural damage to this building (see **Table 4.14-25**). In addition, at this time, other individual projects that may be implemented under Project Category 4 do not have sufficient detail to allow project-level analysis of vibration impacts during construction. However, if historic sites, structures, or sensitive receivers are located within the minimum distances for bull dozers, loaded

trucks, and jackhammers shown in **Table 4.14-25**, then individual projects under Project Category 4 would result in a potentially significant construction vibration impact. Therefore, implementation of MMs **NOI-5** through **NOI-7** would be required, which would reduce impacts to a less than significant level.

Combined Project Categories

Vibration attenuates rapidly with distance, and vibration generated at one CBP construction site would generally not affect the same receivers as vibration generated at another CBP construction site if the construction sites are located more than 120 feet apart from each other. Although multiple individual projects under the CBP may be constructed simultaneously, each project under construction would not be located in such close proximity to other projects under construction. Thus, it is unlikely that the combined effects of individual projects under all project categories would result in greater construction vibration impacts than those evaluated above for each project category. No additional construction vibration impacts would occur as a result of the combined project categories.

Operational Vibration

Operational activities associated with individual projects implemented under the CBP would not include sources of vibration, such as heavy machinery. Components such as injection, extraction, and monitoring wells, pump stations, water treatment facilities, pipelines, turnouts, and reservoirs, do not generate substantial vibration. Therefore, no operational vibration impact would occur, and no mitigation is required.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

NOI-5: ***Whenever practicable, vibration-generating equipment including bull dozers, loaded trucks, drill rigs, vibratory rollers, and jackhammers shall operate outside the minimum distances specified in Table 4.14-25 of the draft PEIR for historic sites, other structures, and vibration-sensitive receivers during CBP construction activities. Furthermore, whenever practicable, vibration-generating equipment including bull dozers, loaded trucks, drill rigs, vibratory rollers, and jackhammers shall not be operated concurrently with vibration-generating equipment associated with cumulative development projects located within 600 feet of CBP construction sites.***

(copied here to accompany this measure)
Table 4.14-25
VIBRATION LEVEL CONTOURS DURING CONSTRUCTION ACTIVITIES

Equipment	*Minimum Distance to Receiving Land Use for a Less Than Significant Impact (feet)*			
	Historic Sites[1]	*All Other Structures[2]*	*Daytime Vibration-Sensitive Land Uses[3]*	*Nighttime Vibration-Sensitive Land Uses[4]*
Large Bull Dozer	*20*	*15*	*10*	*55*
Small Bull Dozer	*5*	*5*	*5*	*5*
Loaded Truck	*20*	*10*	*10*	*35*
Drill Rig[5]	*20*	*15*	*15*	*55*
Vibratory Roller	*40*	*30*	*25*	*110*
Jackhammer	*10*	*5*	*5*	*25*

NOI-6: ***Whenever practicable at CBP construction sites within 120 feet of historic sites, other structures, and vibration-sensitive receivers during CBP construction activities, non-vibratory rollers and small bull dozers shall be utilized instead of vibratory rollers and large bull dozers.***

NOI-7: ***If operation of construction equipment outside the specified buffer distances in Table 4.14-25 of the draft PEIR (copied and provided under NOI-5) is not practicable, a detailed study of vibration impacts shall be conducted prior to the commencement of construction for that project. Such vibration studies shall characterize the nearest historic sites, structures, and/or sensitive receivers; estimate the vibration levels receivers will experience during construction of individual projects; compare estimated vibration levels to applicable FTA (2018) Transit Noise and Vibration Impact Assessment Manual and Caltrans (2020) Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01); standards for vibration impacts related to structural damage and human annoyance; outline any measures that may be used to reduce vibration levels; and determine the amount of vibration reduction that would occur with implementation of these measures. Vibration reduction measures may include, but would not be limited to, the use of non-vibratory equipment, vibration monitoring, repair of structural damage, the installation of wave barriers, maximization of the distance between vibratory equipment and receivers, restriction of vibration-generating activities to daytime hours, and/or temporary relocation of affected residents. Construction vibration reduction measures shall be implemented to reduce vibration levels to FTA (2018) and Caltrans (2020) construction vibration thresholds. If project-level construction vibration cannot be reduced to at or below the FTA (2018) and Caltrans (2020) construction vibration thresholds, IEUA shall either (1) select an alternative site location that avoids exceeding the FTA (2018) and Caltrans (2020) construction vibration thresholds at the nearest historic sites, structures, and/or sensitive receivers, or (2) undergo subsequent CEQA documentation to assess potential site-specific vibration impacts from locating a future facility in close proximity to historic sites, structures, and/or sensitive receivers.***

If the individual project would be constructed concurrently with cumulative development projects located within a 600-foot radius of the individual project construction site, the vibration study shall also consider the cumulative impact of combined vibration levels at the nearest sensitive receivers by estimating the combined vibration levels receivers will experience during construction of individual projects and cumulative development; compare estimated vibration levels to applicable standards for vibration impacts related to structural damage and human annoyance identified by Caltrans (2020) and the FTA (2018); identify whether the individual project's contribution to any identified cumulative impact would be cumulatively considerable; outline any measures that may be used to reduce the project's contribution to combined vibration levels; and determine the amount of vibration reduction that would occur with implementation of these measures. Such measures may include, but are not limited to, the use of non-vibratory equipment, vibration monitoring, repair of structural damage, the installation of wave barriers, maximization of the distance between vibratory equipment and receivers, restriction of vibration-generating activities to daytime hours, and/or temporary relocation of affected residents. Construction vibration reduction measures shall be implemented to reduce cumulative vibration levels to Caltrans and FTA construction vibration thresholds. If cumulative construction vibration cannot be reduced to at or below the FTA (2018) and Caltrans (2020) construction vibration thresholds, IEUA shall either (1) select alternative site locations that avoid exceeding the FTA (2018) and Caltrans (2020) construction vibration thresholds at the nearest historic sites, structures, and/or sensitive receivers, or (2) undergo subsequent CEQA documentation to assess potential site-specific vibration impacts from locating a future facility in close proximity to historic sites, structures, and/or sensitive receivers.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

Level of Significance Before Mitigation: Less than Significant

The geographic scope for cumulative vibration impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed CBP. This geographic scope is appropriate for vibration because the proposed program's vibration impacts are localized and site-specific. Beyond this distance, typical construction and operational vibration would be indistinguishable from the background vibration level due to distance attenuation and interference from environmental conditions.

If concurrent construction activities occur in close proximity to proposed CBP activities, combined construction vibration would have the potential to impact the same sensitive receivers and result in cumulative construction vibration levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction vibration impacts may be potentially significant. Nevertheless, per MMs **NOI-5** through **NOI-7**, individual projects with the potential to generate construction vibration in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction vibration studies and incorporate vibration reduction measures to reduce vibration levels applicable standards, as feasible. As a result, regardless of whether a significant cumulative construction vibration impact is occurring, the proposed CBP's vibration contribution would not be cumulatively considerable with incorporation of MMs **NOI-5** through **NOI-7**.

*Cumulative Measures: Implementation of MMs **NOI-5** through **NOI-7** is required.*

Level of Significance After Mitigation: Less than Significant

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Public use airports and private air strips are located within and near the Chino Basin, including the Ontario International Airport, San Bernardino International Airport, Riverside Municipal Airport, Corona Municipal Airport, Chino Airport, Cable Airport, Flabob Airport, and Brackett Field Airport. As such, individual projects implemented under the CBP identified in **Chapter 3, Project Description**, could be located within two miles of a public or private airport. Airport land use plans establish allowable land uses within areas that are subject to high noise levels related to aircraft operations.

Construction Exposure to Airport Noise

For individual projects proposed under the CBP that are located within two miles of a public use airport or private airstrip, construction workers would be intermittently exposed to elevated noise levels during aircraft take-off and landing events, especially within the 75 and 85 dBA noise level contours of the nearest airport or airstrip. Although aircraft take-off and landing events would contribute to the noise environment, construction noise would be the dominant source of noise exposure for construction workers. Construction contractors would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure

to noise. Section 5096 of these regulations sets duration-based noise exposure limits for construction workers that require provision of personal protective equipment should exposure exceed the specified limits. The requisite adherence to these regulations would reduce construction worker exposure to high noise levels such that proposed CBP construction activities would not expose employees to excessive noise levels. Therefore, construction workers would not be exposed to excessive noise levels from aircraft noise. Construction impacts related to aircraft noise would be less than significant, and no mitigation is required.

Operational Exposure to Airport Noise

Some individual projects implemented under the proposed CBP may be located within two miles of a public use airport or private airstrip. However, none of the proposed CBP projects involve operation of noise-sensitive receivers, such as residences or schools, that would be exposed to excessive airport noise in the Chino Basin. Furthermore, most projects proposed under the CBP, including injection wells, extraction wells, monitoring wells, conveyance pipelines, in-conduit hydropower facilities, turnouts, storage reservoirs, pump stations, and wellhead treatment facilities, would be unmanned and would require infrequent maintenance visits that likely would not require extended exposure to aircraft noise if projects were located near airports or airstrips. The proposed AWPF may require new operation and maintenance activities and permanent staff beyond those currently at RP-4, where it is proposed to be located. However, the RP-4 site is located approximately 3.2 miles northeast of the nearest airport, the Ontario International Airport, and is located outside this airport's noise impact zones as shown on Policy Map 2-3 of the Ontario International Airport Land Use Compatibility Plan.[28] Furthermore, as previously stated, IEUA would be required to comply with California Occupational Safety and Health Administration regulations related to worker exposure to noise. These regulations would reduce employee exposure to high noise levels such that operational activities would not expose employees to excessive noise levels. Therefore, operational impacts related to aircraft noise would be less than significant, and no mitigation is required.

Level of Significance Before Mitigation: Less than Significant

Mitigation Measures: No mitigation is required as impacts would be less than significant.

Level of Significance After Mitigation: Less than Significant

Cumulative Impact Analysis

As discussed above, public use airports and private airstrips are located throughout the Chino Basin. The specific locations of individual projects that may be implemented under the proposed CBP are not all known at this time; therefore, it is also unknown whether individual projects or cumulative projects would be located within the vicinity of airports. Nevertheless, individual projects and cumulative projects would be required to comply with the applicable airport land use plan, federal and State Occupational Safety and Health Administration regulations, and applicable California Building Code standards related to the protection of residents and workers from exposure to excessive aircraft noise. As a result, regardless of whether a significant cumulative noise impact related to airport operations exists, the proposed program would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise, and no mitigation is required.

Cumulative Measures: No mitigation is required as impacts would be less than significant.

[28] Ontario, City of. 2011. *Ontario International Airport Land Use Compatibility Plan*.

Level of Significance After Mitigation: No mitigation is required as impacts would be less than significant.

4.14.6 Unavoidable Adverse Impacts

The programmatic evaluation of noise and vibration presented in the preceding analysis demonstrates that neither construction nor operation of individual projects under the proposed CBP would result in the exceedance of the identified noise and vibration thresholds after implementation of the recommended mitigation measures. Furthermore, although individual projects implemented under the CBP may be located in close proximity to airports throughout the Chino Basin, compliance with existing regulations and the infrequent nature of operation and maintenance activities would minimize to a level of insignificance the potential for the exposure of future employees to excessive noise levels from airport operations. Therefore, no unavoidable significant impact to noise and vibration would result from implementing the proposed CBP.

4.15 POPULATION AND HOUSING

4.15.1 Introduction

This section assesses potential impacts to population and housing from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Population and Housing
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- County of Riverside, Economic Development Agency. 2021. Demographics: Riverside County, California. https://www.rivcoeda.org/Portals/0/BRG-PDFs/2.%20Demographics.pdf (accessed 9/28/21)
- Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf (accessed 9/28/21).
- Southern California Association of Governments. SCAG Local Profiles. 2019. https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx
- State of California, Employment Development Department. 2021. Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) (Riverside and San Bernardino Counties) https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf (accessed 9/28/21)
- Statistic Atlas. 2021. Population of San Bernardino, San Bernardino County, California. https://statisticalatlas.com/county-subdivision/California/San-Bernardino-County/San-Bernardino/Population#data-map/tract (accessed 9/28/21)
- Statistic Atlas. 2021. Population of Jurupa, Riverside County, California. https://statisticalatlas.com/county-subdivision/California/Riverside-County/Jurupa/Population#figure/county-subdivision-in-riverside-area (accessed 9/28/21)
- United States Census Bureau. 2021. QuickFacts: San Bernardino County, California. https://www.census.gov/quickfacts/fact/table/sanbernardinocountycalifornia/AFN120212?sec_ak_reference=18.0bdcf180.1592124716.bd616 (accessed 9/28/21)

No comments pertaining to population and housing were received in response to the Notice of Preparation, or at the scoping meeting held on behalf of the CBP.

4.15.2 Environmental Setting: Population and Housing

The Southern California Association of Governments (SCAG) forecasts three major growth indicators including population, households, and employment for cities and counties in Southern California. These forecasts are provided in the regional transportation plans that are periodically updated by SCAG. The SCAG Local Profiles for each of the cities (excluding unincorporated populations within the Counties) amounts to an estimated population within Chino Basin area of 1,287,231 persons in 2018.

The population data provided within this section reflects research efforts to determine what portions of the unincorporated areas of Riverside and San Bernardino Counties are located within

the Chino Basin area, and furthermore, reflects the population within the general areas in which the project facilities are proposed to be developed. It is assumed that the projected population of the San Bernardino County and Riverside County unincorporated areas within Chino Basin was 99,903 persons in 2010 according to the United States Census.[1,2] The unincorporated Riverside County population within Chino Basin was 0.0028%[3] of the overall unincorporated Riverside County population in 2010, while the unincorporated San Bernardino County population within Chino Basin was 26.67%[4] of the overall unincorporated San Bernardino County population in 2010. To determine the 2018 unincorporated Riverside County and San Bernardino County populations within Chino Basin area, these percentages were multiplied by the current SCAG Local Profile projections for each County. Accordingly, the projected population of the San Bernardino County and Riverside County unincorporated areas within the Chino Basin area was 83,130 persons in 2018.[5] Therefore, the approximate population within the Chino Basin area was 1,370,361 persons in 2018.

Table 0-1 below outlines the population projected within Chino Basin by the SCAG 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS). The SCAG 2020-2045 RTP/SCS is a tool used as a guide for developing regional plans and strategies mandated by the federal and state governments. The projected population in the Chino Basin area in 2045 is 1,724,787 people.

Along with the projected population increases, there would be a corresponding increase in the estimated number of dwelling units within the project area. The estimated number of households in 2018 and 2045 are outlined below in **Table 0-2**, based upon information contained within the SCAG 2020-2045 RTP/SCS. By 2045, the number of households in the Chino Basin area is anticipated to be approximately 494,676 dwelling units, an increase of 30.7 percent compared to 2018. **Table 0-2** summarizes the expected dwelling units for the affected local jurisdictions based upon SCAG data.

As shown **i**n **Table 0-3,** employment is projected to increase by 32.6 percent between 2017 and 2045 for total employment of 659,147 in the Chino Basin area by the year 2045. The unemployment rate in Riverside and San Bernardino Counties was 7.6 percent in 2021.[6]

[1] Statistic Atlas. 2021. Population of San Bernardino, San Bernardino County, California. https://statisticalatlas.com/county-subdivision/California/San-Bernardino-County/San-Bernardino/Population#data-map/tract (accessed 9/28/21)
[2] Statistic Atlas. 2021. Population of Jurupa, Riverside County, California. https://statisticalatlas.com/county-subdivision/California/Riverside-County/Jurupa/Population#figure/county-subdivision-in-riverside-area (accessed 9/28/21)
[3] County of Riverside, Economic Development Agency. 2021. Demographics: Riverside County, California. https://www.rivcoeda.org/Portals/0/BRG-PDFs/2.%20Demographics.pdf (accessed 9/28/21)
[4] United States Census Bureau. 2021. QuickFacts: San Bernardino County, California. https://www.census.gov/quickfacts/fact/table/sanbernardinocountycalifornia/AFN120212?sec_ak_reference=18.0bdcf180.1592124716.bd616 (accessed 9/28/21)
[5] Southern California Association of Governments. SCAG Local Profiles. 2019. https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx (accessed 9/28/21)
[6] State of California, Employment Development Department. 2021. Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) (Riverside and San Bernardino Counties) https://www.labormarketinfo.edd.ca.gov/file/lfmonth/rive$pds.pdf (accessed 9/28/21)

Table 0-1
SCAG POPULATION FORECASTS

Cities/Counties	2018	2045	Population % Increase Between 2018 and 2045
Chino	86,757	121,300	39.8%
Chino Hills	83,159	92,800	11.6%
Eastvale	64,854	72,700	12.1%
Fontana	212,000	286,700	35.2%
Jurupa Valley	106,054	117,800	11.1%
Montclair	40,402	49,200	21.8%
Ontario	177,589	269,100	51.5%
Pomona	155,687	187,600	20.5%
Rancho Cucamonga	176,671	201,300	13.9%
Rialto	107,041	139,100	30.0%
Upland	77,017	93,000	20.8%
Unincorporated Riverside County*	385,953	525,600	36.2%
Unincorporated San Bernardino County*	83,119	94,172	13.3%
TOTAL	**1,370,361**	**1,724,787**	**25.9%**

Sources: Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf (accessed 9/28/21).
Southern California Association of Governments. SCAG Local Profiles. 2019. https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx (accessed 9/28/21)
*Within Chino Basin area as discussed in the Introduction above.

Table 0-2
SCAG HOUSEHOLD FORECAST

Cities/Counties	2018	2045	Housing % Increase Between 2018 and 2045
Chino	23,428	33,100	41.3%
Chino Hills	25,097	28,000	11.6%
Eastvale	15,826	18,500	16.9%
Fontana	52,251	77,800	48.9%
Jurupa Valley	26,646	31,800	19.3%
Montclair	10,546	11,200	6.2%
Ontario	47,879	74,500	55.6%
Pomona	39,548	52,800	33.5%
Rancho Cucamonga	57,365	66,400	15.8%
Rialto	26,768	37,100	38.6%
Upland	26,545	32,800	23.6%
Unincorporated Riverside County*	118,159	180,900	53.1%
Unincorporated San Bernardino County*	26,435	30,671	16.0%
TOTAL	**378,338**	**494,676**	**30.7%**

Sources: Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf (accessed 9/28/21).
Southern California Association of Governments. SCAG Local Profiles. 2019. https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx (accessed 9/28/21)
*Within Chino Basin area as discussed in the Introduction above.

Table 0-3
SCAG EMPLOYMENT FORECAST

Cities/Counties	2017	2045	Employment % Increase Between 2017 and 2045
Chino	48,954	57,400	17.3%
Chino Hills	15,924	17,900	12.4%
Eastvale	8,783	21,600	145.9%
Fontana	55,448	75,100	35.4%
Jurupa Valley	27,456	31,300	14.0%
Montclair	10,546	20,900	98.2%
Ontario	112,689	169,300	50.2%
Pomona	55,978	63,400	13.3%
Rancho Cucamonga	85,922	105,100	22.3%
Rialto	25,317	35,500	40.2%
Upland	34,904	42,200	20.9%
Unincorporated Riverside County*	78,237	139,600	78.4%
Unincorporated San Bernardino County*	15,282	19,443	27.2%
TOTAL	**497,205**	**659,147**	**32.6%**

Sources: Southern California Association of Governments. 2020. Current Context: Demographics and Growth Forecast. https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_demographics-and-growth-forecast.pdf (accessed 9/28/21).
Southern California Association of Governments. SCAG Local Profiles. 2019. https://www.scag.ca.gov/DataAndTools/Pages/LocalProfiles.aspx (accessed 9/28/21)
*Within Chino Basin area as discussed in the Introduction above.

4.15.3 Regulatory Setting

The following regulations are applicable to population and housing.

4.15.3.1 State

Housing Element Law: California Government Code Section 65584(a)(1)
Pursuant to California Government Code Section 65584(a)(1), the California Department of Housing and Community Development (HCD) is responsible for determining the regional housing needs assessment (segmented by income levels) for each region's planning body known as a "council of governments" (COG), SCAG being the COG serving the Southern California area, except for San Diego County. HCD prepares an initial housing needs assessment and then coordinates with each COG to arrive at the final regional housing needs assessment.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg)
Senate Bill (SB) 375 focuses on aligning transportation, housing, and other land uses to achieve regional greenhouse gas (GHG) emission reduction targets established under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32. SB 375 requires Metropolitan Planning Organizations (MPO) to develop a Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan (RTP), with the purpose of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. As set forth in SB 375, the SCS must: (1) identify the general location of land uses, residential densities, and building intensities within the region; (2) identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of

the planning period; (3) identify areas within the region sufficient to house an eight-year projection of the regional housing need; (4) identify a transportation network to service the regional transportation needs; (5) gather and consider the best practically available scientific information regarding resource areas and farmland in the region; (6) consider the state housing goals; (7) establish the land use development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, will reduce GHG emissions from automobiles and light-duty trucks to achieve GHG emission reduction targets set by the California Air Resources Board (CARB), if there is a feasible way to do so; and (8) comply with air quality requirements established under the Clean Air Act.

Housing Crisis Act of 2019 (SB 330, Skinner)
The Housing Crisis Act of 2019 (SB 330) seeks to speed up housing production in the next half decade by eliminating some of the most common entitlement impediments to the creation of new housing, including delays in the local permitting process and cities enacting new requirements after an application is complete and undergoing local review—both of which can exacerbate the cost and uncertainty that sponsors of housing projects face. In addition to speeding up the timeline to obtain building permits, the bill prohibits local governments from reducing the number of homes that can be built through down-planning or down-zoning or the introduction of new discretionary design guidelines. The bill is in effect as of January 1, 2020 and expires on January 1, 2025.

Fair Employment and Housing Act (FEHA)
The FEHA of 1959 (Government Code § 12900 et seq.) prohibits housing discrimination on the basis of race, color, religion, sexual orientation, marital status, national origin, ancestry, familial status, disability, or source of income.

Unruh Civil Rights Act
The Unruh Civil Rights Act of 1959 (California Civil Code § 51) prohibits discrimination in “all business establishments of every kind whatsoever.” The provision has been interpreted to include businesses and persons engaged in the sale or rental of housing accommodations.

AB 1763
AB 1763, effective January 1, 2020, amends the State Density Bonus Law (California Government Code § 65915) to allow for taller and denser 100 percent affordable housing developments, especially those near transit, through the creation of an enhanced affordable housing density bonus.

Housing Element Law
California Government Code Section 65583 requires cities and counties to prepare a housing element, as one of the seven state-mandated elements of the General Plan, with specific direction on its content.

Relocation Assistance Law: California Government Code Section 7261(a)
Section 7261(a) of the California Government Code requires programs or projects undertaken by a public entity must be planned in a manner that (1) recognizes, at an early stage in the planning of the programs or projects and before the commencement of any actions which will cause displacements, the problems associated with the displacement of individuals, families, businesses, and farm operations, and (2) provides for the resolution of these problems to minimize adverse impacts on displaced persons and to expedite program or project advancement and completion. The displacing agency must ensure the relocation assistance advisory services are made available to all persons displaced by the public entity. If the agency determines that any person occupying property immediately adjacent to the property where the displacing activity

occurs is caused substantial economic injury as a result of the displacement, the agency may also make the advisory services available to that person.

4.15.3.2 Local

Southern California Association of Governments

As the designated MPO for the six-county subregion that includes, but is not limited to, Riverside, San Bernardino, and Los Angeles Counties, SCAG prepares several plans to address regional growth, including the RTP/SCS (also known as Connect SoCal). On September 3, 2020, SCAG adopted its Connect SoCal: The 2020-2045 RTP/SCS, which is an update to the previous 2016 RTP/SCS. Using growth forecasts and economic trends, the RTP/SCS provides a vision for transportation throughout the region for the next 25 years that achieves the statewide reduction targets and in so doing identifies the amount and location of growth expected to occur within the region.

The regional growth forecasts undertaken by SCAG are developed through the 2045 planning horizon. SCAG is mandated by federal and State law to research and draw up plans for transportation, growth management, hazardous waste management, and a regional growth forecast that is the foundation for these plans and regional air quality plans developed by the South Coast Air Quality Management District (SCAQMD). SCAG prepares several plans to address regional growth, including the Regional Housing Needs Assessment (RHNA), the RTP/SCS (Connect SoCal), the Federal Transportation Improvement Program (FTIP), and the annual State of the Region reports to measure progress toward achieving regional planning goals and policies. The projected growth in population, household, and employment is the data relied upon during development of SCAG's RTP, SCS, and RHNA. Consistency with the growth forecast at the subregional level is one criterion that SCAG uses in exercising its federal mandate to review "regionally significant" development projects for conformity with regional plans.

Regional Housing Needs Assessment

SCAG prepares the RHNA mandated by State law so that local jurisdictions can use this information during their periodic updates of each General Plan Housing Element. The RHNA identifies the housing needs for very low income, low income, moderate income, and above moderate-income groups, and allocates these targets among the local jurisdictions that comprise SCAG. The RHNA addresses existing and future housing needs based on the most recent United States Census data on forecasted household growth, historical growth patterns, job creation, household formation rates, and other factors. The need for new housing is distributed among the four income groups so that each community moves closer to the regional average income distribution, referred to as a "social equity adjustment."

The most recent RHNA allocation, the 6th Cycle Final RHNA Allocation Plan, was adopted by SCAG's Regional Council on March 4, 2021. This allocation identifies housing needs for the projection period of June 30, 2021 through October 15, 2029. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation.

General Plan

The general plan of each local jurisdiction within the Chino Basin Area includes a Housing Element. A Housing Element is required by State law to be a component of every City's and County's General Plan because housing needs are recognized as a statewide concern. As such, the Housing Element of a local jurisdiction's General Plan is the only element that is subject to approval by the State. Pursuant to State law, the Housing Element must identify the city's/county's

housing needs, the sites that can accommodate these needs, and the policies and programs to assure that the housing units necessary to meet these needs can be provided. The primary goal of a Housing Element is to provide a range of housing opportunities for all income groups.

4.15.4 Thresholds of Significance

According to Appendix G, Section XIV, of the CEQA Guidelines, a project would have a significant effect on population and housing if the project would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.15.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP to population and housing.

a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would include advanced water purification, new injection and extraction facilities, conveyance facilities, and water system interconnections. The proposed project would not include construction of new homes or businesses. Therefore, the proposed project would not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area.

Construction of the proposed infrastructure would require temporary employment. It is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within the Chino Basin area or in close proximity. Operation and maintenance of the majority of the proposed infrastructure would be anticipated to be provided primarily by existing IEUA employees within the Chino Basin area, although the Advanced Water Purification Facility is anticipated to require 8 new operations and maintenance staff. However, the number of new employees required would be minimal and the majority of employees are expected to be drawn from existing population within the Chino Basin. Therefore, the potential increase in new residents within the Chino Basin would be nominal.

Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area; however, it is not forecast to change land uses or otherwise create activities that could increase population or employment beyond that which is anticipated in the local jurisdictions' General Plans.

The CBP is not intended to be directly involved in supplying municipal or recycled water supplies to customers. The CBP may facilitate the provision of local water supply to member agencies, but would not directly deliver municipal or recycled water supplies to customers. Thus, the CBP and its implementation are one step removed from actual development and provisions of adequate water supplies in support of building-out each jurisdictions' general plan. Water does not serve as a constraint to growth and by planning and expanding water system infrastructure to meet this future demand, water purveyors are growth accommodating, not growth inducing.

However, the project's growth inducing effects are further analyzed in Chapter 5, Topical Issues under Growth Inducing Impacts. It is assumed that growth decisions have already been made by local agencies governing land use decisions, and that, furthermore, each individual water agency (listed under CEQA Responsible Agencies in the Project Description) within Chino Basin produces an Urban Water Management Program, which is prepared by a water purveyor to conduct long-term water supply and water resource planning and ensure reliability in water service sufficient to meet the needs of its customer base. As such, the CBP does not remove any existing constraint on future development, because Chino Basin water purveyors have alternative means to meet future water demands.

As such and as stated above, the proposed project is growth accommodating, but it does not in and of itself create opportunities for additional people to move to the region, nor to construct additional housing beyond those previously under consideration to accommodate the population envisioned within the applicable General Plans at buildout within each city and county located in the Chino Basin area. Therefore, the implementation of the proposed project would result in less than significant impacts related to inducement of population growth.

Combined Project Categories

Level of Significance Before Mitigation: No Impact

Mitigation Measures: None Required.

Level of Significance After Mitigation: No Impact.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Once constructed, the proposed wells would occupy a footprint anticipated to be less than one half acre. Land would need to be purchased for each injection well. No housing is proposed to be displaced or eliminated by the proposed wells, particularly given the small footprint of wells. However, given that the locations of the proposed wells are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. A mitigation measure is outlined below to ensure that such an impact is fully mitigated. With implementation of this measure, the proposed project is not forecast to cause a significant displacement of existing housing or persons.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

In general, proposed conveyance pipelines would be aligned through the public right-of-way and properties owned or to be acquired by IEUA to reduce the number of easements required for construction and maintenance. Pipelines would also be parallel to existing pipelines to the extent feasible. However, given that the locations of the proposed conveyance and ancillary facilities are presently unknown, it is remotely possible that the development of specific facilities could adversely impact existing housing. As such, impacts under this Project Category are the same as those identified under Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no potential to displace persons or housing exists as a result of the proposed increase in safe storage capacity.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The AWPF will be installed within the existing IEUA operated facility, RP-4. Given that this facility currently operates as one of IEUA's wastewater treatment plants, no housing or persons would exist within the boundaries of the site. Therefore, the development of the AWPF not displace people or housing.

The location for wellhead treatment facilities at or near well sites is presently unknown. Groundwater treatment facilities near well sites would occupy an area of about 0.5 acre to 2 acres. Impacts to regional groundwater treatment facilities and groundwater treatment facilities near well sites would be the same as Project Categories 1 and 2.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

POP-1: ***If future CBP facilities must be located on parcels occupied by existing housing and displaces that housing as a result, IEUA will assist with a relocation plan in conformance with Section 7260 et seq. of the California Government Code ("California Relocation Assistance Law" or the "Act") to ensure that short- and long-term housing of comparable quality and value are made available to the occupant(s) prior to initiating construction of the facility.***

Level of Significance After Mitigation: Less Than Significant

Mitigation measure (MM) **POP-1** would ensure that the facilities associated with the CBP that must be located on parcels containing housing would be minimized through the provision of short- and long-term housing of comparable quality, thereby minimizing impacts below significance thresholds.

4.15.6 Cumulative Impacts

As previously discussed, the proposed project would not result in a cumulatively considerable contribution to population growth within the region. While development in the region may result in displacement of people or housing, with the implementation of MM **POP-1,** the project would have a less than cumulatively considerable potential to displace people or housing and would therefore not result in a considerable contribution to cumulative impacts to population and housing.

4.15.7 Unavoidable Adverse Impacts

As determined in the preceding environmental evaluation, with the implementation of MM **POP-1**, no significant and unavoidable impacts relating to population and housing would occur as a result of implementing the proposed project, and the project's potential impacts on population and housing will be less than significant.

4.16 PUBLIC SERVICES

4.16 Introduction

This section assesses potential impacts to public services from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Public Services
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- California Highway Patrol. 2021. (818) Inland Communications Center. https://www.chp.ca.gov/find-an-office/inland-division/offices/(818)-inland-empire-communications-center (accessed 9/23/21)
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- City of Ontario. 2021. Police. https://www.ontarioca.gov/Police (accessed 9/23/21)
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No comments pertaining to Public Services were received in response to the Notice of Preparation, and no comments were received at the scoping meeting held on behalf of the CBP.

4.16.2 Environmental Setting: Public Services

4.16.2.1 Fire/Emergency Protection Services

State

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California.[1] In most cases, SRAs are protected directly by CAL FIRE. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the county under response agreements with CAL FIRE. Nonetheless, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the county. In addition, CAL FIRE has cooperative agreements to provide fire protection services to several cities within the county, including the cities of Chino, Chino Hills, Rancho Cucamonga, Jurupa Valley, and

[1] CAL FIRE. 2021. Fire Protection. https://www.fire.ca.gov/programs/fire-protection/ (accessed 9/23/21)

Eastvale.[2] CAL FIRE serves the Chino Basin area via the Prado Station located at 14467 Central Avenue in Chino. There is also a second CAL FIRE location—CAL FIRE West Riverside—within the Chino Basin area at 7545 Mission Boulevard, Jurupa Valley, CA 92509.

Local

San Bernardino County Fire Department

The San Bernardino County Fire Protection District is a community-based, all hazard emergency services provider. The San Bernardino County Fire Department (SBCFD) provides fire and emergency response services to more than 60 communities/cities and all unincorporated areas of the county. SBCFD's Office of Emergency Services (OES) serves as the Operational Area Lead Agency, coordinating the provision of emergency services with the 24 cities and towns in San Bernardino County.[3] SBCFD has 48 professionally staffed fire stations within its service area and 8 paid-call/volunteer fire stations, and covers 19,278 square miles. There are 1,043 county fire personnel and 640 fire suppression personnel.[4] Within the Chino Basin, SBCFD serves the City of Fontana and the City of Upland, as well as unincorporated San Bernardino County. SBCFD fire stations within the Chino Basin service area are listed below in **Table 4.16-1**.

Table 4.16-1
SAN BERNARDINO COUNTY VALLEY DIVISION FIRE STATIONS

Station Location	Station Number	Full Address
Fontana	79	5075 Coyote Canyon Road, Fontana, CA 92336
Fontana	78	7110 Citrus Avenue, Fontana, CA 92335
Fontana	73	8143 Banana Avenue, Fontana, CA 92335
Fontana	71	16980 Arrow Boulevard, Fontana, CA 92335
Fontana	72	15380 San Bernardino Avenue, Fontana, CA 92335
Fontana	74	11500 Live Oak Avenue, Fontana, CA 92335
Fontana	77	17459 Slover Avenue, Fontana, CA 92316
Upland	12	2413 N. Euclid Avenue, Upland, CA 91784
Upland	164	1825 N. Campus Avenue, Upland, CA 91784
Upland	161	475 N. 2nd Avenue, Upland, CA 91786
Upland	163	1350 N. Benson Avenue, Upland, CA 91786
SOURCE: San Bernardino County Fire Protection District. 2021. Service Zone FP-5. https://sbcfire.org/fp5/ (accessed 9/23/21)		

The San Bernardino County Fire Chief's Association compiled a *Fire and Rescue Mutual Aid Operational Plan* to integrate their operational plan as part of the current State of California Fire and Rescue Emergency Plan. The plan provides for the systematic mobilization, organization, and operation of fire and rescue resources within each zone of the county to reduce and minimize effects of emergencies and disasters. The plan provides updated fire and rescue service inventory

[2] CAL FIRE 2021. Cooperative Efforts. https://www.fire.ca.gov/programs/fire-protection/cooperative-efforts/ (accessed 9/23/21)
[3] San Bernardino County Fire Protection District. 2021. About the San Bernardino County Fire Protection District. https://sbcfire.org/about/ (accessed 9/23/21)
[4] San Bernardino County Fire Protection District. 2021. San Bernardino County Fire Statistics (FY 2020-21). https://sbcfire.org/statistics-fy-2020-21/#district-facts-anchor (accessed 9/23/21)

of personnel, apparatus, and equipment amongst all local, regional, and State fire officials. The Chino Basin is within Zone 1 (West Valley) and within a small portion of Zone 2 (East Valley). The plan indicates which fire agencies participate in each zone and the specialized equipment available to each agency.[5] The participating fire agencies within a Mutual Aid Agreement within the Chino Basin area include:

Zone 1

- Chino Valley Fire District
- San Bernardino County Fire Department
- California Institution for Men Fire Department
- California Institution for Women Fire Department
- Montclair Fire Department
- Ontario Fire Department
- Rancho Cucamonga Fire Protection District
- Upland Fire Department
- Ontario International Airport Fire Department

Zone 2

- Fontana Fire Department (contracted with San Bernardino County Fire Department)
- Rialto Fire Department
- San Bernardino County Fire Department

County of Riverside

Limited portions of Riverside County are within the Chino Basin area. The cities of Jurupa Valley and Eastvale are served by the Riverside County Fire Department, as are the unincorporated communities of Riverside County located within and outside the Chino Basin. In 2020, the Riverside County Fire Department responded to 120,462 incidents; the average number of daily calls was 330.[6] The fire stations located within the Chino Basin are outlined under **Table 4.16-33 and Table 4.16-44**, no other Riverside County Fire Department stations are located within the Chino Basin.

CONFIRE

The Chino Valley Fire District (CVFD), Rancho Cucamonga Fire District, and Rialto Fire Department are member agencies of the CONFIRE Joint Powers Authority. The Montclair Fire Department (MFD) also has a dispatch service contract with CONFIRE. CONFIRE has an "All Hazard" emergency aid system via mutual-aid and automatic-aid agreements. These aid agreements allow each fire agency to plan and prepare for large-scale incidents that would otherwise deplete the local available emergency resources.[7]

Cities of Chino and Chino Hills

The cities of Chino and Chino Hills surrounding unincorporated areas of San Bernardino County are served by the CVFD, which is located in the southwest region of San Bernardino County. The CVFD is not a City department, but is a separate political agency with its own elected Board of Directors. The CVFD's jurisdiction covers approximately 80 square miles and has an estimated population of 175,991. The CVFD employs 140 professional firefighters. In 2020, personnel

[5] San Bernardino County Fire Chiefs' Association. 2014. http://www.sbcounty.gov/Uploads/SBCFire/content/pdf/Mutual-Aid-Manual-with-Zone11.pdf (accessed 9/23/21)
[6] Riverside County Fire Department. 2021. Riverside County Fire Department News. http://www.rvcfire.org/Pages/default.aspx (accessed 9/23/21)
[7] CONFIRE. 2021. CONFIRE- Who We Are, What We Do. https://www.confire.org/about-us (accessed 9/23/21)

responded to 12,866 emergency incidents. CVFD is made up of seven stations, one administration building, and one training center, as listed in **Table 4.16-2-2**.[8] CVFD is a member agency of CONFIRE.

Table 4.16-2
CHINO VALLEY FIRE STATIONS

Station Number/Facility	Full Address
Station 61	5078 Schaefer Avenue, Chino, CA 91710
Station 62	5551 Butterfield Ranch Road, Chino Hills, CA 91709
Station 63	7550 Kimball Avenue, Chino, CA 91710
Station 64	16231 Canon Lane, Chino Hills, CA 91709
Station 65	12220 Ramona Avenue, Chino, CA 91710
Station 66	13707 Peyton Avenue, Chino Hills, CA 91709
Station 67	5980 Riverside Drive, Chino, CA 91710
Administration Building	14011 City Center Drive, Chino Hills, CA 91709
Training Center	5092 Schaefer Avenue, Chino, CA 91710
SOURCE: Chino Valley Fire District. 2020. Annual Report 2020 https://www.chinovalleyfire.org/DocumentCenter/View/1526/Annual-Report-2020 (accessed 9/23/21)	

City of Eastvale

The City of Eastvale, Riverside County Fire Department, and CAL FIRE have two fire stations: Station 27 and Station 31. The Eastvale Fire Department provides full service, municipal and wildland fire protection, pre-hospital emergency medical response by paramedics and Emergency Medical Technicians, technical rescue services and response to hazardous materials discharges. About 83 percent of the 1,400 incidents that are responded to in a year (on average) are medical emergencies and about 13 percent are fires. The other 4 percent of incidents include technical rescues and hazardous materials incidents.[9] **Table 4.16-33** outlines the locations of the fire stations within Eastvale.

Table 4.16-3
EASTVALE FIRE STATIONS

Station Number/Facility	Full Address
Station 27	7067 Hamner Avenue, Eastvale, CA 92880
Station 31	14491 Chandler Street, Eastvale, CA 92880
SOURCE: City of Eastvale. 2021. Fire Services. https://www.eastvaleca.gov/government/fire-services (accessed 9/23/21)	

City of Fontana

Fire and emergency response services are provided to the City of Fontana from the Fontana Fire District (FFD). In July 2005, the San Bernardino County Board of Supervisors initiated the reorganization of its fire operations and filed an application with the San Bernardino Local Agency Formation Commission to review and consider the reorganization of the SBCFD. The Fontana City Council proposed that a subsidiary fire district should be made for the city and that its council would govern it. Fontana now contracts services to the SBCFD which serves the city's corporate

[8] Chino Valley Fire District. 2020. Annual Report 2020 https://www.chinovalleyfire.org/DocumentCenter/View/1526/Annual-Report-2020 (accessed 9/23/21)
[9] City of Eastvale. 2021. Fire Services. https://www.eastvaleca.gov/government/fire-services (accessed 9/23/21)

limits and county areas within the city's sphere of influence.[10] The FFD staffs about 33 employees and is comprised of 7 stations (listed above in **Table 4.16-1**).[11]

City of Jurupa Valley

The County of Riverside, through its cooperative agreement with CAL FIRE, provides the Jurupa Valley with fire protection, hazardous materials mitigation, technical rescue response, fire marshal, emergency medical services, public service assists, and disaster preparedness and response. Fire stations within Jurupa Valley are listed in **Table 4.16-4**.

Table 4.16-4
JURUPA VALLEY DIVISION FIRE STATIONS

Station Number/Facility	Full Address
CAL FIRE/Riverside County Fire Department Administrative Headquarters	210 W. San Jacinto Avenue, Perris, CA 92570
Glen Avon Fire Station 17	10500 San Sevaine Way, Jurupa Valley, CA 91752
Pedley Fire Station 16	9270 Limonite Avenue, Jurupa Valley, CA 92509
Rubidoux Fire Station 38	5721 Mission Boulevard, Jurupa Valley, CA 92509
West Riverside Fire Station 18	7545 Mission Boulevard, Jurupa Valley, CA 92509
SOURCE: City of Jurupa Valley. 2021. Cal Fire. https://www.jurupavalley.org/212/Cal-Fire (accessed 9/23/21)	

City of Montclair

The MFD operates two stations (Station 1 and 2), providing 7 days per week, 24 hours per day, and 365 days per year of "all hazard" emergency services to the city. The MFD provides firefighter/paramedics and offers an emphasis on emergency medical services, fire prevention, fire suppression, hazardous materials management, and disaster preparedness.[12]
Table 4.16-5 outlines fire stations within Montclair.

Table 4.16-5
MONTCLAIR FIRE STATIONS

Station Number/Facility	Full Address
Station 1 (MFD)	8901 Monte Vista Avenue, Montclair, CA 91763
Station 2 (MFD)	10825 Monte Vista Avenue, Montclair, CA 91762
SOURCE: City of Montclair. 2021. Fire Department. https://www.cityofmontclair.org/departments/fire-department/ (accessed 9/23/21)	

City of Ontario

The Ontario Fire Department (OFD) works out of 10 stations (Stations 1 through 10, listed below in Table **4.16-6**). These fire stations house nine 4-person paramedic engine companies, three 4-person truck companies, an 8-person air rescue and fire-fighting station, 1 fire investigation supervisor, and 2 battalion chiefs. The OFD serves a population of approximately 185,000 and

[10] City of Fontana. 2021. About the Fontana Fire District. https://www.fontana.org/635/About-the-Fontana-Fire-District (accessed 9/23/21)
[11] City of Fontana. 2021. Stations & Equipment. https://www.fontana.org/639/Stations-Equipment (accessed 9/23/21)
[12] City of Montclair. 2021. Montclair Fire Department History. https://www.cityofmontclair.org/montclair-fire-department-history/ (accessed 9/23/21)

responds to more than 20,000 calls per year, an average of 55 calls per day.[13] OFD employs 182 firefighters and 39 professional staff members.

Table 4.16-6
ONTARIO FIRE STATIONS

Station Number/Facility	Full Address
Station 1	425 E. B Street, Ontario, CA 91764
Station 2	544 W. Francis Street, Ontario, CA 91762
Station 3	1408 E. Francis Street, Ontario, CA 91761
Station 4	1005 N. Mountain Avenue, Ontario, CA 91761
Station 5	1530 E. Fourth Street, Ontario, CA 91764
Station 6	2931 E. Philadelphia Avenue, Ontario, CA 91761
Station 7	4901 E. Vanderbilt Street, Ontario, CA 91761
Station 8	3429 E. Shelby Street, Ontario, CA 91761
Station 9	3100 E. Eucalyptus Avenue, Ontario, CA 91761
Station 10	1230 Tower Drive, Ontario, CA 91764
SOURCE: City of Ontario. 2021. Fire Stations, https://www.ontarioca.gov/Fire/FireStations (accessed 9/23/21)	

City of Pomona

The City of Pomona is served by the Los Angeles County Fire Department (LACFD). The LACFD serves more than 4.06 million residents and commercial business within 60 cities and all unincorporated areas within Los Angeles County's 2,311 square miles. LACFD is one of the world's largest emergency service agencies, and also provides health, hazardous materials, and forestry services throughout the county.[14] **Table 4.16-7** outlines the LACFD fire stations located within Pomona.

Table 4.16-7
POMONA FIRE STATIONS

Station Number/Facility	Full Address
Station 181 (Division and Battalion Headquarter)	590 S. Park Avenue, Pomona, CA 91766-3038
Station 182	1059 N. White Avenue, Pomona, CA 91768-3038
Station 183	708 N. San Antonio, Pomona 91767-4910
Station 184	1980 W. Orange Grove, Pomona 91768-2046
Station 185	925 E. Lexington, Pomona, 91766-5204
Station 186	280 E. Bonita, Pomona, 91767-1924
Station 187	3325 Temple Avenue, Pomona, 91768-3256
Station 188	18 A Village Loop Road, Pomona, 91766-4811
Station 189 (open during Los Angeles County Fair)	1101 McKinley Avenue, Pomona, 91768
SOURCE: City of Pomona. 2021. Fire Department. https://www.pomonaca.gov/government/departments/fire-department?locale=en (accessed 9/23/21)	

[13] City of Ontario. 2021. Fire Department. http://www.ontarioca.gov/fire (accessed 9/23/21)
[14] County of Los Angeles Fire Department. 2020. 2020 Statistical Summary. https://fire.lacounty.gov/wp-content/uploads/2021/06/2020-Statistical-Summary-FINAL-DRAFT.pdf (accessed 9/23/21)

City of Rancho Cucamonga

The City of Rancho Cucamonga is served by the Rancho Cucamonga Fire Protection District (RCFPD). The RCFPD serves a 50 square mile area that serves more than 176,000 residents.[15] The RCFPD's 7 fire stations are each staffed with a 3-person fire engine with two of the stations also housing a 4-person fire truck.[16] The RCFPD operates out of seven stations, within its jurisdiction, as listed below in **Table 4.16-8**. RCFPD is a member agency of CONFIRE.

Table 4.16-8
RANCHO CUCAMONGA FIRE STATIONS

Station Number/Facility	Full Address
Station 171	6627 Amethyst Street, Rancho Cucamonga, CA 91737
Station 172	9612 San Bernardino Road, Rancho Cucamonga, CA 91730
Station 173	12270 Fire House Court, Rancho Cucamonga, CA 91739
Station 174	11297 Jersey Boulevard, Rancho Cucamonga, CA 91730
Station 175	11108 Banyan Street, Rancho Cucamonga, CA 91737
Station 176	5840 E. Avenue, Rancho Cucamonga, CA 91739
Station 177	9270 Rancho Street, Rancho Cucamonga, CA 91737
SOURCE: City of Rancho Cucamonga. 2021. Rancho Cucamonga Fire Protection District. https://www.cityofrc.us/sites/default/files/2021-02/Station%20Locations%202021_0.pdf (accessed 9/23/21)	

City of Rialto

The Rialto Fire Department serves the City of Rialto, which contains 22 square miles and over 100,000 people. The Rialto Fire Department has five fire stations staffed 24 hours per day by firefighters and one administrative officer. The Rialto Fire Department staffs one battalion chief, three engine companies, one truck company, and four paramedic ambulances each day. On-duty personnel also provide staffing for a Hazardous Materials unit and an Urban Search and Rescue unit.[17] The Rialto Fire Department is a member agency of CONFIRE. The fiver fire stations are listed in
Table 4.16-9.

Table 4.16-9
RIALTO FIRE STATIONS

Station Number/Facility	Full Address
Station 201	131 S. Willow Avenue, Rialto, CA 92376
Station 202	1700 N. Riverside Avenue, Rialto, CA 92376
Station 203	1550 N. Ayala Drive, Rialto, CA 92376
Station 204	3288 N. Alder Avenue, Rialto, CA 92376
Station 205	1485 S. Willow Avenue, Rialto, CA 92376
SOURCE: City of Rialto. 2021. Facilities. https://www.yourrialto.com/Facilities?clear=False (accessed 9/23/21)	

[15] City of Rancho Cucamonga. 2021. About the Rancho Cucamonga Fire District. https://www.cityofrc.us/news/about-rancho-cucamonga-fire-district (accessed 9/23/21)
[16] City of Rancho Cucamonga. Fire District - Our History. https://www.cityofrc.us/sites/default/files/2020-10/Our%20History.pdf (accessed 9/23/21)
[17] City of Rialto. 2021. Fire Department. https://www.yourrialto.com/233/Fire-Department (accessed 9/23/21)

City of Upland
Fire protection and emergency medical response services in Upland are provided by the San Bernardino County Fire District, Division 1 Headquarters (Station 161) located at 475 North Second Avenue in Upland.

4.16.2.2 Police Protection Services

State
The California Highway Patrol (CHP) is a law enforcement agency created in 1929 to provide uniform traffic law enforcement for the State of California. The CHP has jurisdiction over all Interstates and State Routes in the IEUA service area including: I-10, I-15, SR-60, SR-71, SR-142, SR-210, SR-83, and SR-66. The IEUA service area is served by the CHP Inland Division, which has two facilities in the area. The Inland Communications Center (ICC) is located at 13892 Victoria Street in Fontana, and is the fourth largest CHP communications center with a complement of nearly 70 employees, including 56 Public Safety Dispatchers. ICC serves the citizens of one of the fastest expanding areas of California, answering approximately 55,000 calls for service each month.[18] The Rancho Cucamonga Station is located at 9530 Pittsburgh Avenue in Rancho Cucamonga, and patrols over 250 square miles of freeways and unincorporated roadways in and around the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland.[19] The San Bernardino Station is located at 2211 Western Avenue in San Bernardino, and serves the cities of Rialto and Fontana.[20] Pomona is served by the Southern Division of the CHP, located at 411 North Central Avenue in Glendale.[21]

Local

San Bernardino County Sheriff's Department
The San Bernardino County Sheriff's Department (SBCSD), in collaboration with various cities and other agencies that have jurisdiction in the county, provides law enforcement services to the incorporated cities and the unincorporated communities in the county. Many cities have contracted police protection services to the SBCSD, including Chino Hills and Rancho Cucamonga. Personnel of the SBCSD provide law enforcement services to citizens through 8 county and 14 contract patrol stations.[22]

Riverside County Sheriff's Department
Riverside County is the fourth largest of California's 58 counties in both population and physical area. It has consistently been among the fastest growing counties in the country, covering more than 7,300 square miles. The Riverside County Sheriff's Department provides police protection services to 17 of the 28 cities in Riverside County. The Riverside Sheriff's Department is the second largest Sheriff's department in California, employing over 3,600 staff.[23] The Chino Basin area is served by the Jurupa Valley Station, which is commanded by a captain and consists of a

[18] California Highway Patrol. 2021. (818) Inland Communications Center. https://www.chp.ca.gov/find-an-office/inland-division/offices/(818)-inland-empire-communications-center (accessed 9/23/21)
[19] California Highway Patrol. 2021. (855) Rancho Cucamonga. https://www.chp.ca.gov/Find-an-Office/Inland-Division/Offices/(855)-Rancho-Cucamonga (accessed 9/23/21)
[20] California Highway Patrol. 2021. (860) San Bernardino. https://www.chp.ca.gov/Find-an-Office/Inland-Division/Offices/(860)-San-Bernardino (accessed 9/23/21)
[21] California Highway Patrol. 2021. Southern Division. https://www.chp.ca.gov/find-an-office/southern-division (accessed 9/23/21)
[22] San Bernardino County Sheriff's Department. 2021. About Us. https://wp.sbcounty.gov/sheriff/about-us/ (accessed 9/23/21)
[23] Riverside County Sheriff's Department. https://www.riversidesheriff.org/27/About-Us

patrol function and an investigative function providing contract police services for the cities of Eastvale and Jurupa Valley, and for unincorporated county areas in its vicinity. The Jurupa Valley Station is located at 7477 Mission Boulevard in Jurupa Valley.

City of Chino

The Chino Police Department (CPD), located at 5450 Guardian Way in Chino, is comprised of more than 150 employees, both sworn and professional staff, and over 50 volunteers. CPD serves more than 85,000 residents within 30 square miles. The CPD handles over 9,600 calls for service each month and provides full service operations in various divisions, such as: Patrol, Traffic Enforcement, Criminal Investigations, Special Enforcement Team, School Resource Officer, Crime Analysis, Communications, and Crime Prevention, amongst many others.[24]

City of Chino Hills

The Chino Hills Police Department (CHPD) has been contracted with SBCSD since 1991. The City consists of approximately 46 square miles with a population of 83,000 people. The CHPD Station has 52 sworn personnel and 15 civilian personnel assigned. Deputies respond to over 40,000 calls for service per year in the city and have a large volunteer unit consisting of Citizens on Patrol, Explorer Post, and Reserve Deputy Sheriffs.[25] The Chino Hills Station is located at 14077 Peyton Drive in Chino Hills.[26]

City of Fontana

The Fontana Police Department (FPD), located at 17005 Upland Avenue in Fontana, currently staffs 188 sworn officers, and serves approximately 55 square miles and over 200,000 people.[27,28]

City of Montclair

The Montclair Police Department (MPD) serves a 5.5-square mile area of approximately 37,000 residents. The MPD staffs 60 sworn officers that offer specialized assignments such as a Detective Bureau, Narcotics Investigations Task Force, Motor Officer Program, and Technical Services. In addition to the MPD's sworn force, it employs 50 full- and part-time civilian support personnel and 18 volunteers. Led by the Chief of Police, the MPD comprises three divisions: Administrative, Support Services, and Field Services, and is located at 4870 Arrow Highway in Montclair.[29]

City of Ontario

The Ontario Police Department (OPD) has three main service bureaus and employs 409 sworn and civilian positions, as well as K-9 units.[30] The OPD has one main station, located at 2500 South Archibald Avenue in Ontario, and one substation at the Ontario Mills Mall, located at 1 Mills Circle in Ontario. In addition to serving Ontario, the OPD participates in mutual aid agreements with different public agencies to provide the optimum level of service during times of emergency. The OPD holds a mutual aid agreement with the SBCSD and various jurisdictions surrounding

[24] City of Chino Police Department. 2021. Our Operations. https://www.cityofchino.org/cms/One.aspx?portalId=10382662&pageId=11471237 (accessed 9/23/21)
[25] San Bernardino County Sheriff's Department. 2021. Chino Hills Patrol Station. https://wp.sbcounty.gov/sheriff/patrol-stations/chino-hills/ (accessed 9/23/21)
[26] City of Chino Hills. 2021. Chino Hills Station. https://www.chinohills.org/163/Chino-Hills-Station (accessed 9/23/21)
[27] City of Fontana. 2021. About Us. https://www.fontana.org/2509/About-Us (accessed 9/23/21)
[28] City of Fontana. 2021. Patrol Unit. https://www.fontana.org/206/Patrol-Unit (accessed 9/23/21)
[29] City of Montclair. 2021. Police Department. https://www.cityofmontclair.org/departments/police-department/ (accessed 9/23/21)
[30] City of Ontario. 2021. Police. https://www.ontarioca.gov/Police (accessed 9/23/21)

Ontario. The City of Ontario also participates in a statewide mutual aid program facilitated by the OES.

City of Pomona

The Pomona Police Department provides law enforcement services to the city to preserve and protect life and property; enforce city, county, State, and federal statutes, ordinances, and laws; investigate criminal activities; apprehend criminals and recover stolen property; provide programs to educate the public in crime prevention; and process all parking citations.[31] The Pomona Police Department's Operations Division is the largest in the Department and is responsible for the field services provided in the City by uniformed personnel. Specialized units within the Division include the K9 Unit, Youth Services Unit, SWAT team, Bike Patrol, and all augment Patrol Services. These units work together in an effort to reduce crime and increase service delivery with the ultimate goal of public safety in a city of an estimated 150,000 people in 23 square miles. Pomona is the fourth largest city by population in Los Angeles County. Patrol Services represent the primary function of the Police Department. This program has the responsibility of protecting life and property, as well as maintaining law and order, preserving peace and security in the community, and positively impacting the quality of life for Pomona's residents. The Police Department is located at 490 West Mission Boulevard in Pomona.[32]

City of Rancho Cucamonga

As previously described, the Rancho Cucamonga Police Department (RCPD) contracts with the SBCSD to provide law enforcement services for the city. The SBCSD's 182 Sheriff's personnel serve Rancho Cucamonga citizens out of one main station, located at 10510 Civic Center Drive in Rancho Cucamonga, and one substation in Victoria Gardens Shopping Center, located at 7743 Kew Avenue in Rancho Cucamonga. The SBCSD serves a 38-square mile area with approximately 177,000 people. The RCPD also works in cooperation with the law enforcement agencies of neighboring cities and jurisdictions, as well as State and federal agencies.[33]

City of Rialto

The Rialto Police Department (RPD) employs 176 total employees. The RPD serves 28.5 square miles with a population of over 100,000 people. The RPD station is located at 128 North Willow Avenue in Rialto.[34]

City of Upland

The Upland Police Department (UPD) is comprised of three divisions and 70 sworn and professional personnel that work out of one station located at 1499 West 13th Street in Upland. The UPD serves approximately 16 square miles and over 76,000 residents. The UPD works with neighboring cities to provide 24 hours per day,7 days per week protection services.[35,36]

[31] City of Pomona. 2021. Police Department. https://www.ci.pomona.ca.us/index.php/government/City-departments/police-department (accessed 9/23/21)
[32] City of Pomona. Operations Division. 2021. https://www.pomonaca.gov/government/departments/police-department/operations-division (accessed 9/23/21)
[33] San Bernardino County Sheriff's Department. 2021. Rancho Cucamonga Patrol Station. https://wp.sbcounty.gov/sheriff/patrol-stations/rancho-cucamonga/ (accessed 9/23/21)
[34] Rialto Police Department. 2021. Our Department. https://rialtopolice.com/our-department (accessed 9/23/21)
[35] City of Upland. 2021. Police Department. https://www.uplandca.gov/police (accessed 9/23/21)
[36] City of Upland. 2021. Patrol. https://www.uplandca.gov/patrol (accessed 9/23/21)

4.16.2.3 Schools

San Bernardino County Superintendent of Schools

With a county-wide kindergarten through 12th grade (K-12) student population of approximately 407,268 students attending 558 schools in the 2019-2020 school year, the San Bernardino County Superintendent of Schools (SBCSS) office, located at 601 North East Street in San Bernardino is a regional agency that provides vital and necessary service, leadership, and advocacy to the 34 K-12 school districts in the county.[37]

The Chino Basin area within San Bernardino County is made up of eight K-12 school districts and has a student population of approximately 153,398 students attending 180 schools.

Table 4.16-10 shows the eight cities in the Chino Basin area in the county, the school districts associated with the cities, the number of schools in each district, and the total student population/enrollment.

Table 4.16-10
SAN BERNARDINO COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2019-2020)
Chino & Chino Hills	Chino Valley Unified School District	35	28,169
Fontana	Fontana Unified School District	44	36,160
Upland	Upland Unified School District	14	10,580
Montclair & Ontario & Rancho Cucamonga	Chaffey Joint Union High School District Mountain View School District Ontario-Montclair School District	11 4 32	23,724 2,540 20,147
Rancho Cucamonga	Central School District Cucamonga School District	7 4	4,449 2,443
Rialto	Rialto Unified School District	29	25,186
Total	--	**180**	**153,398**

SOURCE: Education Data Partnership. 2021. District Summary. https://www.ed-data.org/district/San-Bernardino/San-Bernardino-County-Office-of-Education (accessed 9/23/21)

Los Angeles County Office of Education

With a county-wide K-12 student population of approximately 1,436,522 students attending 2,212 schools in the 2019-2020 school year, the Los Angeles County Office of Education, located at 69300 Imperial Highway in Downey, is a regional agency that provides vital and necessary service, leadership, and advocacy to the 89 K-12 school districts in the county. [38]

The portion of the Chino Basin area within Los Angeles County is made up of one K-12 school district, the Pomona Unified School District, that serves the City of Pomona. **Table 4.16-11** shows the number of schools in the district and the total student population/enrollment.

[37] Education Data Partnership. 2021. San Bernardino County – County Summary. http://www.ed-data.org/County/San-Bernardino (accessed 9/23/21)
[38] Education Data Partnership. 2021. San Bernardino County – County Summary. http://www.ed-data.org/County/San-Bernardino (accessed 9/23/21)

Table 4.16-11
LOS ANGELES COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2019-2020)
Pomona	Pomona Unified School District	41	22,766
SOURCE: Education Data Partnership. 2021. District Summary. https://www.ed-data.org/district/Los-Angeles/Pomona-Unified (accessed 9/23/21)			

Riverside County Office of Education

With a county-wide K-12 student population of approximately 431,521 students attending 495 schools in the 2019-2020 school year, the Riverside County Office of Education, located at 3939 Thirteenth Street in Riverside, is a regional agency that provides vital and necessary service, leadership, and advocacy to the 26 K-12 school districts in the county. [39]

The portion of the Chino Basin within Riverside County is made up of one K-12 school district and has a student population of approximately 71,646 students that attend 76 schools (Education Data Partnership, 2020). **Table 4.16-12** shows the cities in the area, school districts associated with the Cities, the number of schools in each district, and the total student population/enrollment.

Table 4.16-12
RIVERSIDE COUNTY AREA SCHOOL DISTRICTS

City	District	Number of Schools	Student Population (2019-2020)
Eastvale	Corona-Norco Unified School District	52	52,557
Jurupa Valley	Jurupa Unified Schools District	24	19,089
Total	--	**76**	**71,646**
SOURCE: Education Data Partnership, 2021. District Summary. https://www.ed-data.org/county/Riverside (accessed 9/23/21)			

4.16.2.4 Parks

Please refer to Subsection 4.17.1, *Setting*, in Subchapter 4.17, *Recreation*, for a discussion of parks within the Chino Basin.

4.16.2.5 Library Services

Like parks, open space, recreational facilities, and cultural opportunities, libraries contribute to the quality of life in a community. These community facilities can enhance a region's character as a good place to live and raise a family. In addition, a good library system contributes to the quality of educational opportunities in the area. Library facilities are provided throughout the Chino Basin area by the cities and counties. Library services are provided according to levels of service established through the respective jurisdictions' General Plans.

[39] Education Data Partnership. 2021. San Bernardino County – County Summary. http://www.ed-data.org/County/San-Bernardino (accessed 9/23/21)

4.16.3 Regulatory Setting

The following regulations are applicable to public services. See Subchapter 4.16, *Recreation*, for a discussion of regulations governing parks, and see Subchapter 4.21, *Wildfire*, for a discussion of regulations related to wildfire.

4.16.3.1 Federal

Fire

Disaster Mitigation Act (2000-Present)
Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) requires a state mitigation plan as a condition of disaster assistance. There are two different levels of state disaster plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act has also established new requirements for local mitigation plans.

National Fire Plan (NFP) 2000
The National Fire Plan was developed under Executive Order 11246 in August 2000, following a landmark wildland fire season. Its intent is to actively respond to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

Police, Schools, and Libraries
There are no applicable federal regulations related to police protection, schools, or library services.

4.16.3.2 State

Fire

California Fire Code
The California Fire Code (CFC) is a series of building, property, and lifeline codes outlined in Title 24, Part 9 of the California Code of Regulations. The CFC is based on the International Fire Code, which is a collection of best practices agreed upon by professional fire agencies and organizations. The CFC uses a hazards classification system to outline the measures to take to protect life and property. It also regulates hazardous materials at fixed facilities. The CFC, along with the California Building Code, is updated every three years to incorporate recommendations by the International Code Council.

California Fire Plan
The Strategic California Fire Plan is the State's road map for reducing the risk of wildfire. The plan was updated in 2020 and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan. In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of CAL FIRE's 21 units and six contract counties. The plans include stakeholder contributions and priorities, and identify strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

California State Multi-Hazard Mitigation Plan, draft (updated 2013)
The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to substantially reduce deaths, injuries, and other losses attributed to natural and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, State, and federal agencies as well as the private sector. The State Office of Emergency Services prepares the California SHMP. The SHMP identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is federally required under the Disaster Mitigation Act of 2000 in order for the State to receive federal funding. The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

California Fire and Building Code (2019)
The 2019 Fire and Building Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout California.

Government Code Section 65302.5: General Plan Fire Safety Element Review
This statute requires the State Board of Forestry and Fire Protection to provide recommendations to a local jurisdiction's General Plan fire safety element at the time that the General Plan is amended. While not a direct and binding fire prevention requirement for individuals, General Plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction.

Police

California Commission on Peace Officer Standards and Training (POST)
The California Commission on Peace Officer Standards and Training (POST) advocates for, exchanges information with, sets selection and training standards for, and works with law enforcement and other public and private entities. POST was established by the Legislature in 1959 to identify common needs that are shared by representatives of law enforcement.

School

California Code of Regulations
Title 5 of the California Code of Regulations, Education Code, governs all aspects of education within the State.

California State Assembly Bill 2926 (AB 2926) – School Facilities Act of 1986 – was enacted by the State of California in 1986 and added to the California Government Code as Section 65995. It authorizes school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also initially established that the maximum fees which may be collected under this and any other school fee authorization are $1.50 per square foot for residential development and $0.25 per square foot for commercial and industrial development.

AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Sections 66000 et seq. of the Government Code. Under these statutes, payment of statutory fees by developers serves as total mitigation under CEQA to satisfy the impact of development on school facilities. However, subsequent legislative actions have alternatively expanded and contracted the limits placed on school fees by AB 2926.

California Senate Bill 50 (SB 50)
As part of the further refinement of the legislation enacted under AB 2926, the passage of SB 50 in 1998 defined the Needs Analysis process in Government Code Sections 65995.5-65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. The fees (Level One fees) are addressed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level Two fees require the developer to provide one-half of the costs of accommodating students in new schools, while the state would provide the other half. Level Three fees require the developer to pay the full cost of accommodating the students in new schools and would be implemented at the time the funds available from Proposition 1A (approved in 1998) are expended. School districts must demonstrate to the State their long-term facilities' needs and costs based on long-term population growth in order to qualify for this source of funding. However, voter approval of Proposition 55 in 2004 precludes the imposition of the Level Three fees for the foreseeable future. Therefore, once qualified, districts may impose only Level Two fees, as calculated according to SB 50 (Greene 1998).

Libraries
There are no applicable state regulations related to library services.

4.16.3.3 Local

The general plans and municipal codes of each jurisdiction within the Chino Basin include policies and ordinances to maintain adequate staff and facilities to ensure adequate public service are provided.

4.16.4 Thresholds of Significance

According to Appendix G, Section XV, of the CEQA Guidelines, a project would have a significant effect on public services if the project would:

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives;
b) Result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives;
c) Result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives;
d) Result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives; or

e) Result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives.

4.16.5 Potential Impacts

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The proposed project would not include construction of new homes or businesses that would result in a direct increase in population or create a substantial number of new jobs that would result in new residents of the Chino Basin area. Therefore, the project would not result in a direct need for additional fire protection services.

Construction of the proposed project would require temporary employment. It is unknown whether these employees would be drawn from within or outside the Chino Basin area; however, as discussed under Subchapter 4.15, *Population and Housing*, it is reasonable to assume that many employment opportunities would be filled by workers drawn from the Chino Basin area or its close proximity.

Operation and maintenance of the majority of the proposed infrastructure would be anticipated to be provided primarily by existing IEUA and other utility agency employees within the Chino Basin area. The Advanced Water Purification Facility is anticipated to require 8 new operations and maintenance staff. The number of new employees required would be minimal and the majority of new employees are expected to be drawn from existing population within the Chino Basin. The nominal potential increase in potential new residents within the Chino Basin may contribute to a minimal increased demand for fire protection services.

Implementation of the proposed project would increase resiliency and sustainability of regional water resources management within the Chino Basin area; however, it is not forecast to change land uses or otherwise create activities that could increase demand for additional fire protection services beyond that anticipated in the General Plans of the local jurisdictions within the Chino Basin.

In addition, operational activities associated with the proposed Advanced Water Purification Facility and other proposed treatment facilities may require fire department service in the unlikely event of a hazardous materials emergency or accident/medical emergency at a given individual project site. However, a Hazardous Materials Business Plan (HMBP) would be required for use of chemicals during operation (i.e., sulfuric acid, sodium hypochlorite, ammonia sulfate, hydrogen peroxide, sodium bisulfite, etc.). Additionally, IEUA has developed safety standards and operational procedures for safe transport and use of its operational and maintenance materials that are potentially hazardous, which comply with all federal, State, and local regulations, thereby minimizing the potential for the need for fire protection services. Although the proposed project may result in an additional demand on fire protection services, the implementation of the HMBP and/or continuation of adopted safety standards and procedures by would result in a nominal increase in service. Any project improvements requiring structures would be required to meet applicable fire and building codes. The indirect increase in population and the use of hazardous

materials associated with project development would result in a nominal increase in fire protection services. As a result, no new fire protection facilities or altered facilities would be required. Impacts related to fire protection services would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Operation of the proposed facilities is not forecast to require more than 8 additional permanent employees. Similar to the discussion under issue 4.16.5(a) above, the development of the proposed project would not cause a substantial increase in population that would substantially increase demand for police protection services. Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area; however, it is not forecast to change land uses or otherwise create activities that could increase demand for additional police protection services beyond that which is anticipated in the local jurisdictions' General Plans. The Chino Basin area is currently served by police departments and agencies under authority of the various jurisdictions that comprise the Chino Basin as discussed under the Settings sections above. Overall levels of police service would be increased based upon the future population growth and demands of the local agencies within the Chino Basin. Operational activities associated with the proposed project could require police department service in the unlikely event of an emergency or trespass at a given project site. However, it is anticipated that all sites containing facilities associated with the proposed project would be fenced in and contain security lighting, which would minimize the future need for police protection from trespass. Though a significant demand for police protection services is not anticipated, mitigation is proposed to address trespass issues.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

PS-1: CBP facilities shall be fenced or otherwise have access controlled to prevent illegal trespass to attractive nuisances, such as construction sites.

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure (MM) **PS-1** above would minimize the potential for trespass that could exacerbate police protection services. As such, impacts are less than significant.

c) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Similar to the discussions under Fire and Police Protection above, the development of the proposed project would not cause a substantial increase in demand for schools. Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area. However, implementation of the proposed project is not forecast to change existing land uses or increase either the number of residential units located within the Chino Basin area or the number of students generated from the Chino Basin area beyond that anticipated in the local jurisdictions' General Plans. Operation of the proposed project is not forecast to require more than 8 additional permanent employees which would result in a nominal increase in demand for school services. School Districts in the Chino Basin area have adopted classroom loading standards (number of students per classroom) and collect development fees per square foot of residential, commercial, and industrial development. Because the proposed project is not forecast to change land uses, increase housing, or create activities that can increase demand for additional school capacity beyond that anticipated in the local jurisdictions' General Plans, and because there are adopted standards and development fees are collected for new development, impacts related to demand for school services would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant

d) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The proposed project would not include construction of new homes or businesses. Therefore, the proposed project would not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area. Construction of the proposed infrastructure would require temporary employment. As discussed under Subchapter 4.15, *Population and Housing*, it is reasonable to assume the majority of the construction employment opportunities would be filled by workers living within the Chino Basin area or in close proximity. Operation and maintenance of the majority of the proposed infrastructure would be anticipated to be provided primarily by existing IEUA and other utility agency employees within the Chino Basin area. The Advanced Water Purification Facility is anticipated to require 8 new operations and maintenance staff. However, the number of new employees required would be minimal and the majority of employees are expected to be drawn from existing population within the Chino Basin. The nominal potential increase in potential new residents within the Chino Basin may contribute to a minimal increased demand for parks. Nonetheless, because the proposed project would not substantially increase the population within the Chino Basin area, the proposed project would not substantially increase use of existing parks

Construction and staging areas may result in the temporary closure of parks or portions of parks. However, several parks in the Chino Basin area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The development of wells will not cause a significant demand for parks and recreational facilities; however, there is a potential that a proposed well or other CBP related facility could be located within parks or facilities designated for such use. Construction and staging areas within parks at which CBP facilities may be installed may result in the temporary closure of parks or portions of parks. However, several parks in the Chino Basin area would be available for use. This increased use of other parks would be temporary, during construction only. Once construction is completed, parks would return to serve their original purpose, with only slightly less parkland area available for use. In addition to well development within existing parks, there is a potential for wells or other CBP facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such, mitigation is provided below to ensure that, for CBP facilities located within vacant land designated for park uses, or for CBP facilities larger than one acre in size within existing park facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

Once in operation, the proposed wells would not directly increase the population as discussed under Police Protection, Fire Protection, and Schools, though there is a potential for this development to result in nominal indirect population growth. Overall demand for parks and recreation facilities will be increased based on the future population-based demands of the local agencies within the Chino Basin. The CBP is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Pipelines and ancillary facilities would be installed primarily within or adjacent to public rights-of-way to the extent feasible. While pipelines would be located below ground, ancillary facilities would be installed above ground and would be fenced. As stated under Project Category 1 above, the CBP is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and

because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of CBP related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any visible above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, no potential to substantially impact parks or recreation facilities exists.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The implementation of the proposed AWPF at RP-4 would not result is a substantial increase in permanent employees in support of the CBP operations. However, as stated under Project Category 1 above, there is a potential for a nominal number of new positions to be created as a result of CBP implementation, which is inclusive of operations of the proposed AWPF and other CBP facilities. As stated under Project Category 1 above, the CBP is not anticipated to create activities that can increase demand for additional park and recreation facilities beyond that which is anticipated in the jurisdiction's General Plans, and because there are adopted standards and development fees are collected for new development that are directed towards parks and recreation facilities, no other potential for adverse impacts to parks and recreation facilities are identified beyond those addressed through the mitigation provided below. Furthermore, as discussed under Project Category 1 above, there is a potential for the development of CBP related facilities to impact the availability of parkland; mitigation is required to address this issue. As a result, impacts would be the same as described above for Project Category 1.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

PS-2: CBP facilities proposed to be located within vacant parkland or CBP facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland or (2) shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the CBP facility.

Level of Significance After Mitigation: Less Than Significant

Implementation of MM **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of CBP projects located within facilities designated for such uses. As such, impacts are less than significant.

e) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Similar to the discussion under Fire Protection, Police Protection, and School Services above, the development of the proposed project would not cause a significant increase in demand for library or other public services. The proposed project would not include construction of housing that would result in any direct increase in demand for library or other public services. Operation of the proposed project is not forecast to require more than 8 additional permanent employees. However, new employees are anticipated to come primarily from within the Chino Basin area; therefore, the project would result in only a nominal increase in demand for libraries and other public services. Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area. However, the project is not forecast to change land uses or otherwise create activities that can increase demand for library services beyond that which is anticipated in the local jurisdictions' General Plans. Libraries are currently provided by the counties and other local agencies under authority of the various jurisdictions that comprise the Chino Basin. Local agencies would increase overall levels of library service based upon the future population within their jurisdiction. The project would not substantially increase demand for library or other public services and impacts would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None Required.

Level of Significance After Mitigation: Less Than Significant.

4.16.6 Cumulative Impacts

As previously discussed, the proposed project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would not substantially increase demand for public services. However, the proposed project has a potential to, without MM **PS-1**, which requires all CBP project sites to be fenced, attract trespass, and thus result in greater demand for police protection. With the implementation of MM **PS-1**, police protection impacts would be reduced to a level of less that cumulatively considerable, and therefore would not contribute to significant cumulative impacts thereof. However, the proposed project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the CBP could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result. MM **PS-2** would ensure that CBP site selection would not impact the cumulatively available parkland within the region, thus reducing the impacts to parks to less than cumulatively considerable. Therefore, the project would not result in a considerable contribution to cumulative impacts to public services.

4.16.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of MMs **PS-1** and **PS-2**, no significant and unavoidable impacts relating to public services would occur as a result of implementing the proposed project, and the project's potential impacts on public services will be less than significant.

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4.17 RECREATION

4.17 Introduction

This Subchapter section assesses potential impacts to parks and recreational facilities from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Recreation
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

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- City of Rancho Cucamonga. 2021. Parks and Facilities. https://regis.maps.arcgis.com/apps/Shortlist/index.html?appid=8f5b91cb41df4bb48ba64231b319891d (accessed 9/21/21)
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- Jurupa Community Services District. 2021. About the Parks Department. https://www.jcsd.us/services/parks-and-recreation/about-the-parks-dept (accessed 9/21/21)
- Riverside County Planning Department. 2015. General Plan, Multipurpose Open Space Element. December. https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 9/21/21)
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- San Bernardino County Regional Parks. 2021. Prado Regional Park https://parks.sbcounty.gov/park/prado-regional-park/ (accessed 9/21/21)

No comments pertaining to Recreation were received in response to the Notice of Preparation, and no comments were received at the scoping meeting held on behalf of the CBP.

4.17.2 Environmental Setting: Recreation

4.17.2.1 Federal Lands

Three national parks managed by the National Park Service are located within San Bernardino County and offer a variety of recreational opportunities to residents in the local area, including Death Valley National Park, Mojave National Preserve, and Joshua Tree National Park. Also, portions of the San Gabriel Mountains National Monument, created October 10, 2014, by Presidential Proclamation 9194, and the San to Snow National Monument, created February 12, 2016, by Presidential Proclamation 9396, are located within San Bernardino County. However, neither those National Parks nor the Monuments lie within the Chino Basin.

Federal lands managed by the United Stated Forest Service, including the Angeles and San Bernardino National Forests, border the northern portion of the Chino Basin and offer a variety of recreational activities to local residents.[1] In addition, lands just south of the San Bernardino County line are managed by the Bureau of Land Management (BLM). None of these National Forest or BLM lands lie within the Chino Basin.

4.17.2.2 California State Parks and Recreation Department

The California Department of Forestry and Fire Protection (CAL FIRE) is responsible for fire protection within State Responsibility Areas (SRAs), including 31 million acres throughout California.[2] In most cases, SRAs are protected directly by CAL FIRE. However, in some counties, such as San Bernardino County, fire protection within the SRA is provided by the county under

[1] County of San Bernardino. 2020. County of San Bernardino Countywide, County Policy Plan. October. http://countywideplan.com/wp-content/uploads/2020/12/CWP_PolicyPlan_20201027_adopted.pdf (site accessed 9/21/21)
[2] CAL FIRE. 2021. Fire Protection. https://www.fire.ca.gov/programs/fire-protection/ (accessed 9/23/21)

response agreements with CAL FIRE. Nonetheless, depending on the scale and circumstances of the fire, CAL FIRE responds with firefighting resources to assist the county. In addition, CAL FIRE has cooperative agreements to provide fire protection services to several cities within the county, including the cities of Chino, Chino Hills, Rancho Cucamonga, Jurupa Valley, and Eastvale.[3] CAL FIRE serves the Chino Basin area via the Prado Station located at 14467 Central Avenue in Chino. There is also a second CAL FIRE location—CAL FIRE West Riverside—within the Chino Basin area at 7545 Mission Boulevard, Jurupa Valley, CA 92509.

4.17.2.3 San Bernardino County Regional Parks Department

The San Bernardino County Regional Parks Department manages and maintains nine regional parks throughout San Bernardino County totaling approximately 9,200 acres in diverse settings, including metropolitan areas, mountains, and deserts. Recreational opportunities found at these regional parks include lakes for fishing, sheltered group picnic facilities, recreational vehicle (RV) and tent camping, and swim complexes with water slides, water play parks, and playgrounds.[4] The following two regional parks are located within the Chino Basin area.

The Cucamonga-Guasti Regional Park is located in the City of Ontario and provides 150 acres of outdoor recreation activities in an urban setting, with amenities including two lakes for fishing, a swim complex with water slides and a water play park, and picnic tables and group picnic shelters.[5]

Prado Regional Park is located in the Chino Basin in the southern portion of the IEUA service area. The park offers opportunities for fishing, camping, hiking, biking, disc golf, and picnicking. The park also features a meeting room, two golf courses, an Olympic shooting range, and opportunities for horseback riding and archery.[6]

4.17.2.4 Riverside County Regional Parks Department

The Riverside County Regional Park and Open-Space District (RivCoParks) manages parks within the unincorporated portions of Riverside County.[7]

RivCoParks maintains 35 regional parks, encompassing roughly 23,317 acres. Other local parks fall under the jurisdiction of Riverside County Recreation and Park District and serve the following areas: Beaumont-Cherry Valley area; Coachella Valley; Jurupa area; and Valleywide area incorporating San Jacinto Valley, Winchester area, Menifee Valley, and Anza Valley. Included as part of the RivCoParks' facilities is the Jurupa Valley Boxing Club and the Rancho Jurupa Regional Sports Park, which is home to 32 acres of lush, natural, and synthetic turf fields. Comprised of four large marked and lighted synthetic turf fields, two large natural turf fields as

[3] CAL FIRE 2021. Cooperative Efforts. https://www.fire.ca.gov/programs/fire-protection/cooperative-efforts/ (accessed 9/23/21)
[4] San Bernardino County Regional Parks. 2021. About Us. https://parks.sbcounty.gov/about-us/ (site accessed 9/21/21)
[5] San Bernardino County Regional Parks. 2021. Cucamonga-Guasti Regional Park. https://parks.sbcounty.gov/park/cucamonga-guasti-regional-park/ (site accessed 9/21/21)
[6] San Bernardino County Regional Parks. 2021. Prado Regional Park https://parks.sbcounty.gov/park/prado-regional-park/ (accessed 9/21/21)
[7] Riverside County Regional Park and Open-Space District. 2021. Welcome to the RivCoParks. https://www.rivcoparks.org/about-us/ (accessed 9/21/21)

well as nine smaller natural turf fields, the park is available by reservation for many outdoor activities.[8]

4.17.2.5 City Recreation Departments

City of Chino

The Chino Community Services Department provides residents with a complete system of community and neighborhood parks, trails, facilities, and recreational opportunities.[9] The City of Chino strives to provide a variety of programs and services for individuals, families, youth, and seniors (50+) that include healthy lifestyle options, recreational and educational classes, counseling and prevention education, trips and tours, youth and adult sports, etc. Recreational centers within the city include the Neighborhood Activity Center, located at 5201 D Street, which is designed to provide centralized recreation and Human Service programs for Chino residents; the Preserve Community Center, located at 15800 Main Street; and the Carolyn Owens Community Center, located at 13201 Central Avenue.[10] In addition, there are 26 parks within Chino.[11]

City of Chino Hills

The City of Chino Hills Recreation Division provides recreation activities to residents of Chino Hills. There are approximately 44 parks and five community recreation facilities within Chino Hills.[12]

City of Eastvale

The City of Eastvale includes two different park districts located within the boundaries of the city: the Jurupa Community Services District (JCSD) and the Jurupa Area Recreation and Park District (JARPD). Residents that live west of Hamner Avenue within the city are part of the JCSD.

JCSD provides park and recreation services as well as maintaining frontage landscaping and providing water, sewer, and street lights for the City of Eastvale.13 There are currently 13 parks in Eastvale with additional parks planned or in different stages of development. This accounts for approximately 250 acres of open space in Eastvale. Currently there are approximately 50 recreation programs for families to choose from, which include recreational programming for off-track, before school, after school and Fun Fridays at three Elementary Schools in the Eastvale Area.[14]

There are four parks in Eastvale east of Hamner Avenue (between Hamner Avenue and Inter-state 15) that are part of the JARPD.[15]

[8] Riverside County Planning Department. 2015. General Plan, Multipurpose Open Space Element. December. https://planning.rctlma.org/Portals/14/genplan/general_Plan_2017/elements/OCT17/Ch05_MOSE_120815.pdf?ver=2017-10-11-102103-833 (accessed 9/21/21)
[9] City of Chino. 2021. Community Services. https://www.cityofchino.org/City_hall/departments/communityservices (accessed 9/21/21)
[10] City of Chino. 2021. Recreation. https://www.cityofchino.org/residents/connection (accessed 9/21/21)
[11] City of Chino. 2021. Parks. https://www.cityofchino.org/residents/parks (accessed 9/21/21)
[12] Chino Hills. 2021. Parks & Facilities. https://www.chinohills.org/87/Park-Facility-Guide (accessed 9/21/21)
[13] Jurupa Community Services District, 2021. About the Parks Department. https://www.jcsd.us/services/parks-and-recreation/about-the-parks-dept (accessed 9/21/21)
[14] City of Eastvale. 2021. Parks and Recreation. https://www.eastvaleca.gov/community/parks-and-recreation (accessed 9/21/21)
[15] Jurupa Area Recreation and Park District. 2021. About Us. https://www.jarpd.org/about-us (accessed 9/21/21)

Montclair
The City of Montclair Human Services Department provides services for the recreation center, youth center, and senior center, and the Parks Division of the Public Works Department provides maintenance of the parks.[16] The Civic Center is located at 5201 Benito Street and contains city Hall, Council Chambers, Youth Center, Skate Park, Community Center, Gym, Senior Center, Recreation Center, Library, South Conference Room, Technology Center, and Alma Hofman Park. The Public Works Department maintains 11 community and neighborhood parks that provide active and passive recreational opportunities such as ball fields, ball courts, playground equipment, picnic areas, and open grass areas.[17]

Ontario
The City of Ontario Recreation and Community Services Department provides recreational, educational, and cultural activities to the community. The Recreation and Community Services Department provides services at community centers, parks and schools throughout Ontario. Currently, the city provides 32 parks and 7 community centers and 3 dog parks support a variety of recreational opportunities to its residents.[18]

Pomona
The Community Services Department provides low-cost/free recreation programs for all ages, assists Pomona's Youth and Family Master Plan, coordinates rentals of city facilities, including community centers and picnic pavilions, and issues permits for special events and park usage. There are 30 parks within Pomona, which include the following amenities: restrooms, parking, barbeque grills, picnic tables, drinking fountains, community centers, patios, playgrounds, baseball/softball fields, soccer fields, basketball courts, tennis courts, swimming pools, and concession stands.[19]

Rancho Cucamonga
The City of Rancho Cucamonga Park and Recreation Commission acts in an advisory capacity to the city council with respect to park and recreation facilities and services. The city provides 30 parks, 7 recreation facilities, 3 dog parks, 1 golf course, and 1 trail for various activities, including walking, running, biking, hiking, and horseback riding.[20]

Rialto
The City of Rialto Community Services Department provides recreation, leisure, and community services.[21] The city provides 10 parks with ballfields, basketball courts, picnic area, shelters, walking paths, tennis courts, and playground.[22]

[16] City of Montclair. 2021. About the Department. https://www.cityofmontclair.org/departments/human-services-department/ (accessed 9/21/21)
[17] City of Montclair. 2021. Parks. https://www.cityofmontclair.org/parks/ (accessed 9/21/21)
[18] City of Ontario. 2021. Parks. https://www.ontarioca.gov/Parks (accessed 9/21/21)
[19] City of Pomona. Community Services/Recreation. https://www.pomonaca.gov/government/departments/neighborhood-services/community-services-parks-recreation?locale=en (accessed 9.22.21)
[20] City of Rancho Cucamonga. 2021. Parks and Facilities. https://regis.maps.arcgis.com/apps/Shortlist/index.html?appid=8f5b91cb41df4bb48ba64231b319891d (accessed 9/21/21)
[21] City of Rialto. 2021. Community Services. https://www.yourrialto.com/163/Community-Services (accessed 9/22/21)
[22] City of Rialto. 2021. City Parks. https://www.yourrialto.com/164/City-Parks (accessed 9/22/21)

Upland
The Community Services Department provides the City of Upland's citizens with quality services, recreational programs, and well-maintained parks. The city provides 10 parks, with amenities such as amphitheaters, ballfields, barbeque areas, dog parks, fitness trails, picnic tables, playgrounds, skate parks, etc. [23]

4.17.3 Regulatory Setting

4.17.3.1 State

Quimby Act
The Quimby Act was established by the California legislature in 1965 to provide parks for growing communities in California. The Act authorizes cities to adopt ordinances addressing park land and/or fees for residential subdivisions for the purpose of providing and preserving open space and recreational facilities and improvements. The Act requires the provision of a minimum of three acres of park area per 1,000 persons residing within a subdivision. The Act also specifies acceptable uses and expenditures of such funds.

State Public Park Preservation Act
This primary instrument for protecting and preserving parkland is the State Public Park Preservation Act pf 1971. Under the Public Resource Code Section 5400, et seq., cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

State Street and Highway Code
The State Street and Highway Code assists in providing equestrian and hiking trails within the right-of-way of county roads, streets, and highways.

4.17.3.2 Local

Municipal Codes
Development within each of the jurisdictions within the project area is regulated by the respective municipal code for those jurisdictions, which contain requirements for payment of development fees to fund parks and recreational facilities in accordance with the Mitigation Fee Act (California Government Code §§ 66000-66025).

4.17.4 Thresholds of Significance

According to Appendix G, Section XVI, of the CEQA Guidelines, a project would have a significant effect on recreation if the project would:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

[23] City of Upland. 2021. Community Services. https://www.uplandca.gov/community-services (accessed 9/21/21)

4.17.5 Potential Impacts

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project would include advanced water purification, new injection and extraction facilities, conveyance facilities, and water system interconnections. The proposed project does not include construction of new homes or businesses. Therefore, the proposed project would not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area. Construction of the proposed infrastructure would require temporary employment. As discussed in Subchapter 4.15, Population and Housing, it is reasonable to assume that the majority of the construction employment opportunities would be filled by workers living within or in close proximity to the Chino Basin area. The Advanced Water Purification Facility is anticipated to require 15 new operations and maintenance staff. However, the number of new employees required would be minimal and the majority of employees are expected to be drawn from the existing population within the Chino Basin. Operation and maintenance of the other proposed infrastructure would be anticipated to be provided primarily by existing IEUA employees within the Chino Basin area. However, a nominal number of new operations and maintenance employees may be required. The nominal potential increase in potential new residents within the Chino Basin may contribute to a minimal increased demand for parks and recreation facilities. However, because the proposed project would not substantially increase the population within the Chino Basin area, the proposed project would not substantially increase use of existing neighborhood or regional parks or other recreational facilities.

Furthermore, analysis contained in Subchapter 4.16, Public Services, under issue (d) determined whether the CBP would increase the use of existing neighborhood and regional parks or other recreational facilities and physical deterioration thereof. As stated under issue (d) of Subchapter 4.16, the development of CBP facilities may be located within parks or facilities designated for parks and/or recreation use. Construction and staging areas within parks and/or recreation facilities at which CBP facilities may be installed may result in the temporary closure of such facilities or portions of such facilities. However, several park and recreation facilities in the Chino Basin area would be available for use. This increased use of other park and recreation facilities would be temporary, during construction only. Once construction is completed, park and recreation facilities would return to serve their original purpose, with only slightly less land area available for such uses. In addition to CBP facility development within existing park and recreation facilities, there is a potential for CBP facilities to be developed within a vacant site designated for park use, which would effectively minimize available designated parkland within the Chino Basin. As such, mitigation is required to ensure that, for CBP facilities located within vacant land designated for park and/or recreation facility use, or for CBP facilities larger than one acre in size within existing park and/or recreation facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility.

The significance determination was less than significant with the implementation of Mitigation Measure **PS-2**.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of MM **PS-2** is required to achieve a less than significant impact. MM **PS-2** is repeated below for reference.*

PS-2: CBP facilities proposed to be located within vacant parkland or CBP facilities proposed to be located within existing park or recreation facilities that would require more than one acre of disturbance shall be either (1) relocated to avoid significant impacts to parkland, or (2) shall provide supplemental parkland within the corresponding jurisdiction equal or greater to the amount of parkland or recreation facilities lost as a result of implementation of the CBP facility.

Level of Significance After Mitigation: Less Than Significant

Implementation of Mitigation Measure (MM) **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of CBP projects located within facilities designated for such uses. As such, impacts are less than significant.

b) Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The development of CBP facilities will not involve the construction or expansion of recreational facilities. There is a potential that a proposed CBP facility could be located within parks or facilities designated for such use. Depending on the area required for the given CBP facility, an individual project could result in the removal of all or a portion of a park or recreational facility. The removal of a facility could require the construction of new park or recreational facilities elsewhere to accommodate for the loss of the existing recreational facility. As such, mitigation is required to ensure that, should loss of recreation or park facilities occur, replacement occurs resulting in impacts to recreational facilities are minimized.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: **PS-2** outlined under Subsections 4.16.5(d) and 4.17.5(a), above as well as the following:

REC-1: IEUA shall prepare subsequent CEQA documentation for any Parks or Recreation facilities required to be developed as part of implementation of mitigation measure PS-2—i.e., in the event a CBP Facility would be result in loss of parkland or recreation facilities.

Level of Significance After Mitigation: Less Than Significant

Implementation of MM **PS-2** above would minimize the potential for loss of park or recreational facilities as a result of CBP projects located within facilities designated for such uses. As such, impacts are less than significant. Implementation of MM **REC-1** would ensure that, should construction of recreation or park facilities be required as a part of the CBP, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated.

4.17.6 Cumulative Impacts

As discussed above in Subchapter 4.15, the proposed project would not result in a cumulatively considerable contribution to population growth within the region, and as such, the project would

not substantially increase demand for recreation facilities. However, the proposed project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the CBP could have a potential to decrease parkland within the region, and could result in a significant cumulative impact as a result. MM **PS-2** would ensure that CBP site selection would not impact the cumulatively available parkland within the region, and MM **REC-1** would ensure that subsequent CEQA documentation is completed should new park or recreation facilities be required to replace a loss thereof as a result of CBP implementation, thus reducing the impacts to park and recreation facilities to less than cumulatively significant. Therefore, the project would not result in a considerable contribution to cumulative impacts to public services.

4.17.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of MMs **PS-2** and **REC-1**, no significant and unavoidable impacts relating to recreation would occur as a result of implementing the proposed project, and the project's potential impacts on recreation will be less than significant.

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4.18 TRANSPORTATION

4.18.1 Introduction

This Subchapter assesses potential impacts to transportation from implementation of the Chino Basin Program (CBP).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Tribal Cultural Resources
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- American Railway Engineering and Maintenance-of-Way Association. 2019. Manual for Railway Engineering - Chapter 10: Structures, Maintenance, and Construction.
- California Department of Transportation. 2015. Transportation Management Plan Guidelines.
- California Department of Transportation. 2020. Transportation Analysis Framework – First Edition.
- California Department of Transportation. 2020. Transportation Analysis under CEQA – First Edition.
- California State Transportation Agency. 2021. California Transportation Plan.
- California Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluation of Transportation Impacts in CEQA.
- San Bernardino Associated Governments. 2020. 2045 San Bernardino County Long Range Transit Plan.
- Southern California Association of Governments. 2020. 2045 Regional Transportation Plan/Sustainable Communities Strategy (also known as SoCal Connect).

No comments pertaining to transportation were received in response to the Notice of Preparation, nor were any comments received at the scoping meeting held on behalf of the CBP.

4.18.2 Environmental Setting: Transportation

The existing transportation system in the region consists of a complex network of State and federal highways, arterial, and local streets; transit services; a series of bicycle paths and pedestrian walkways, railroad lines, and aviation facilities.

4.18.2.1 Roadway Circulation System

The Chino Basin is located in Southern California within the western portion of San Bernardino Valley, just east of Los Angeles County and northeast of Orange County. The Basin extends into a small portion of northwestern Riverside County, west of the Santa Ana River. The Chino Basin consists of about 250 square miles and includes the cities of Upland, Montclair, Ontario, Fontana, Chino, Chino Hills, and Rancho Cucamonga in San Bernardino County. Portions of the cities of Eastvale and Jurupa Valley are in the Chino Basin, as well as areas of unincorporated San Bernardino and Riverside counties.

Freeways, arterial highways, and local streets serve as the dominant system of transportation within the Chino Basin. In addition to automobile travel, other transportation systems within the counties include mass transit (bus and passenger train systems), bicycle routes, pedestrian facilities networks, rail service, and air transportation. The Chino Basin is primarily located in San Bernardino County, which currently contains about 10,000 miles of roadways, including interstate freeways, U.S. highways, State highways, and local roadways. The roadways described below (federal, State, regional, and local) are located within the San Bernardino Valley Region of the County, and many of the roadways extend into western Riverside County and the cities of Eastvale and Jurupa Valley.

Roadway Network

Federal and State Roadways

Interstate 15 (I-15) – I-15 extends north from the San Diego metropolitan area through the western portions of San Bernardino and Riverside Counties and continues in a northeasterly direction to Las Vegas, Nevada and beyond.

Interstate 215 (I-215) – I-215 provides an alternative route to I-15 through San Bernardino County and Riverside County by splitting from I-15 near Devore and reconnecting with the I-15 south in the City of Murrieta.

Interstate 10 (I-10) – I-10 travels east-west across the southern edge of Valley Region in San Bernardino County. This facility provides access to Los Angeles to the west and Arizona and beyond to the east.

Interstate 210 (I-210) – I-210 begins at an interchange with I-5 in Los Angeles County and continues east across the Valley Region to its current terminus at an interchange with I-10 in Redlands, California.

State Route 60 (SR-60) – SR-60 is an east-west route that extends across the Chino Basin in San Bernardino County and Riverside County. SR-60 provides the Inland Empire with access to the Los Angeles metropolitan area to the west and Riverside County to the east.

State Route 83 (SR-83) – SR-83 is a north-south arterial that travels through the Valley Region of San Bernardino County. This roadway provides direct connections between I-210, SR-66, I-10, SR-60, and SR-71.

State Route 71 (SR-71) – SR-71 travels southeast from the I-10/I-210 Interchange in San Dimas to SR-91 in Corona. This facility serves as a major commuter route between the Inland Empire and Orange County.

State Route 66 (SR-66) – In San Bernardino County, SR-66 begins as Foothill Boulevard at the Los Angeles County line and is classified as a State highway. It extends eastward through the cities of Upland, Rancho Cucamonga, Fontana, and Rialto, as well as unincorporated portions of San Bernardino County.

Major Regional and Local Roadways: Chino Basin East/West Roadways

16th Street / Base Line Road – This primary two- to six-lane arterial extends across the entire Valley Region of San Bernardino County. It operates as an east-west connector for the cities of Upland, Rancho Cucamonga, Rialto, San Bernardino, and Highland.

4th Street – This four- to six-lane roadway is located in Ontario. It operates as a primary arterial and is a major east-west link across the city. This facility extends both to the east and west outside Ontario as San Bernardino Avenue.

Arrow Route – This two- to four-lane roadway is a major connector that provides access to several communities within the Valley Region of San Bernardino County. It begins at the Los Angeles County line in Upland and extends through Rancho Cucamonga, unincorporated San Bernardino County, Fontana, and Rialto.

Edison Avenue – This four- to six-lane roadway begins just east of SR-71 in Chino and extends eastward through Ontario. It is classified as a primary arterial.

Grand Avenue – This four- to six-lane primary arterial extends from the boundary between Chino and Chino Hills westward through Chino Hills into Los Angeles County.

Merrill Avenue / Mill Street –This two- to four-lane secondary arterial originates at Cherry Avenue in unincorporated San Bernardino County, west of Fontana.

San Bernardino Avenue / 4th Street – This two- to four-lane roadway extends across a large portion of San Bernardino County and travels through Montclair, Ontario (as 4th Street), Rancho Cucamonga, Fontana, and Rialto, as well as unincorporated portions of San Bernardino County, before ending in Colton.

Valley Boulevard – This four-lane primary arterial runs parallel to I-10 to the north. Beginning just east of Etiwanda Avenue, this roadway continues east through unincorporated San Bernardino County and Fontana and Rialto before terminating at Mount Vernon Avenue in Colton.

Mission Boulevard – This is a four-lane primary arterial that extends across the Chino Basin from Pomona east through Jurupa Valley where it transitions to become Van Buren Avenue.

Riverside Drive – This roadway varies between a four- and two-lane arterial that extends across the Chino Basin from SR 71 on the west through Eastvale and Jurupa Valley, terminating at Etiwanda Avenue in Jurupa Valley.

Major Regional and Local Roadways: Chino Basin North/South Roadways

Alder Avenue – Alder Avenue is a two- to four-lane north-south connector that provides access along the eastern boundary of Fontana. This roadway is a secondary arterial that extends from Baseline Road to San Bernardino Avenue. Continuing south into unincorporated San Bernardino County, this roadway becomes a residential street.

Archibald Avenue – This four- to six-lane primary arterial extends from Hillside Road in Rancho Cucamonga, through Ontario and into unincorporated Riverside County. This arterial is a major

north-south corridor across San Bernardino County that provides access to I-210, I-10, and SR-60, as well as Ontario International Airport.

Central Avenue – This four- to six-lane roadway travels through the Upland, Montclair, and Chino, as well as unincorporated portions of San Bernardino County, along the western edge of San Bernardino County. Beginning at Foothill Boulevard just south of Cable Airport, this roadway provides a north-south connection between I-10, SR-60, and SR-71.

Cherry Avenue – This four- to six-lane roadway is located almost entirely within Fontana with a portion traversing through unincorporated San Bernardino County. This roadway extends from north of I-15 south to Slover Avenue as a primary arterial. From Slover Avenue to Mulberry Avenue, it is reduced to a secondary arterial. This roadway provides a connection between I-210 and I-10, and I-10 to SR 60.

Citrus Avenue – Citrus Avenue is a two- to four-lane roadway located in Fontana that extends from just south of I-15 at Duncan Canyon Road to Slover Avenue as a primary arterial. From Slover Avenue, this roadway becomes a secondary arterial and continues to Jurupa Avenue.

Etiwanda Avenue – Etiwanda Avenue is a four- to six-lane primary arterial located in Rancho Cucamonga, Ontario, and Fontana and unincorporated San Bernardino County. This roadway provides direct access to I-10 and SR-60 in Riverside County.

Grove Avenue – This roadway is a four-lane secondary arterial that extends from Foothill Boulevard in Upland south to the Chino Airport in Ontario. South of the airport, it continues to Pine Avenue in unincorporated San Bernardino County.

Haven Avenue – Haven Avenue is a four- to eight-lane primary arterial located in Rancho Cucamonga and extends through Ontario. This arterial provides direct access to I-210, I-10, and SR-60.

Monte Vista Avenue – Monte Vista Avenue is a four- to six-lane roadway that begins at SR-210 in Los Angeles County and travels south through Montclair and Chino. Between I-210 and I-10, this roadway is classified as a primary arterial.

Mountain Avenue – The northern terminus of this two- to six-lane roadway is with Mt. Baldy Road at the Los Angeles County line. From here, Mountain Avenue crosses a portion of unincorporated San Bernardino County and Upland and Ontario before ending at Edison Avenue in Chino. This roadway is classified as a primary arterial except for the segment between 19th Street and 16th Street, which is classified as a state highway (SR-30).

Sierra Avenue – Sierra Avenue is a two- to six-lane major north-south corridor through the Valley Region of San Bernardino County. This roadway begins just north of I-15 in the northern portion of Fontana. It is a primary arterial and has interchanges with I-15, I-210, and I-10 before it terminates just southeast of Armstrong Road in Riverside County.

Truck Routes

Cities often develop a truck route plan, which designates truck routes (for construction activities) to provide drivers with the preferred travel roadways to and from connecting local roadways. For example, Chino, Upland, Rancho Cucamonga, Fontana, Montclair, and Ontario have such plans.

4.18.2.2 Public Transit Circulation System

The public transit agencies that serve the project area include Omnitrans, Foothill Transit Agency, Valley Transportation Service (which is specifically dedicated to improving mobility for senior, disabled, and low-income residents within San Bernardino Valley), and the Riverside Transit Authority bus system. These public transit agencies provide bus services with a wide variety of bus routes across the counties overlapping the Chino Basin, as well as into adjacent jurisdictions. In addition to the local transit agencies, Greyhound offers regional and nationwide bus service to San Bernardino County residents with seven stations located throughout San Bernardino County boundaries and offers connections to location such as Los Angeles, Las Vegas, and Phoenix. San Bernardino County Transportation Authority (SBCTA)[1] also operates two programs for individuals and one for employers through which commuters can receive financial incentives by participating in a rideshare program. Metrolink provides east-west passenger train service in the Valley Region, with both at-grade and grade-separated crossings of the tracks that are approximately midway between I-10 and I-210.

4.18.2.3 Bicycle and Pedestrian Circulation System

San Bernardino County's existing bicycle and pedestrian facilities are outlined in the Non-Motorized Transportation Plan (NMTP) prepared by the San Bernardino Associated Governments (SANBAG) in 2015. The NMTP outlines the type of bicycle and pedestrian facilities that currently exist within the county, as well as includes planning efforts and recommendations for future facilities. With respect to bicycle facilities, the county includes three classes of bikeways: Class I (Shared Use Path or Bike Path), Class II (Designated Bike Lane), and Class III (Designated Bike Route). There are numerous bikeways throughout the county. The NMTP designates trails that bicyclists can utilize, which include the Pacific Electric Trail, Santa Ana River Trail, Flood Control Channels, Power Line Corridors, Cajon Pass Connector – Route 66 Heritage Trail, and Orange Blossom Rail Trail. With respect to pedestrian facilities, there are many designated trails and sidewalk systems that can be utilized by pedestrians within the county.

4.18.2.4 Railroad Circulation System

The rail network within Chino Basin includes all rail lines or other facilities currently served by a railroad for passenger or freight movement, rail lines used for recreational service, rail lines not currently in use, and abandoned rail lines or facilities (either with or without track). Union Pacific Railroad serves most of Chino's manufacturing and distribution facilities with additional vacated rail lines and land set aside for activation as needed.

The Southern California Regional Rail Authority (SCCRA) is a regional Joint Powers Authority. Its purpose is to plan, design, construct, operate, and maintain regional commuter rail lines serving the counties of San Bernardino, Los Angeles, Orange, Riverside, and Ventura. The SCRRA consists of the five county transportation agencies identified above, including SBCTA. SCRRA operates on conventional railroad track and right-of-way (ROW), which are owned either by one of the County transportation agencies or by a private freight railroad company that has conveyed operating rights to SCRRA. The design, operation, and maintenance of the SCRRA system are governed by Federal Railroad Administration (FRA) regulations and California Public Utilities Commission (CPUC) General Orders (GOs).

[1] In January 2017, the San Bernardino Associated Governments (SANBAG) split into the San Bernardino County Transportation Authority (SBCTA) and San Bernardino Council of Governments (SBCOG).

4.18.2.5 Aviation Circulation System

Aviation facilities in the Chino Basin consist of Ontario International Airport (ONT) and the Chino Airport. ONT serves the western United States via transcontinental and international flights and is also the location of United Parcel Service's Southern California primary hub serving the entire western United States along with major shippers such as FedEx and DHL. Chino Airport is available for corporate flights and small cargo transport.

4.18.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.18.3.1 State

California Transportation Plan

The California Transportation Plan is prepared by the California State Transportation Agency every five years to provide a long-range policy framework to meet the State's future mobility needs and reduce greenhouse gas emissions to goals set by the California Global Warming Solutions Act of 2006 (AB 32; discussed in Subchapter 4.8, Greenhouse Gas Emissions/Climate Change) and implementing legislation SB 375 (discussed below). The most recent California Transportation Plan was adopted in 2021. The California Transportation Plan defines goals, performance-based policies, and strategies to achieve the State's collective vision for a future statewide, integrated, multimodal transportation system by envisioning a sustainable system that improves mobility and enhances quality of life.

Senate Bill 743

SB 743 (2013) changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact. (See PRC § 21099(b)(2) ["automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA]"].)

Under SB 743, the Governor's Office of Planning and Research (OPR) established vehicle miles traveled (VMT) as the preferred metric for measuring transportation impacts of most projects in place of level of service (LOS) or related measures of congestion as the primary metric. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of OPR's Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, as of July 1, 2020, is the required metric statewide.

The California Department of Transportation (Caltrans) has provided two guidance documents to address VMT impacts on the state highway system consistent with the requirements of SB 743 and the OPR Technical Advisory:

- The Transportation Analysis under CEQA provides information to support CEQA practitioners in making CEQA significance determinations for transportation impacts of projects on the state highway system.
- The Transportation Analysis Framework guides the preferred approach for analyzing the VMT attributable to proposed projects (induced travel) in various project settings.

CEQA Guidelines Section 15064.3

CEQA Guidelines Section 15064.3 implements SB 743 and establishes VMT as the most appropriate measure of transportation impacts. This marks a shift away from the traditional LOS analysis that evaluated the impacts of a project on traffic conditions at nearby roadways and intersections. The primary components of Section 15064.3 include:

- Identifies VMT as the most appropriate measure of transportation impacts
- Declares that a project's effect on automobile delay shall not constitute a significant environmental impact (except for projects increasing roadway capacity)
- Creates a rebuttable presumption of no significant transportation impacts for (a) land use projects within 0.5 mile of either an existing major transit stop or a stop along an existing high quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT
- Allows a lead agency to qualitatively evaluate VMT if existing models are not available
- Gives lead agencies discretion to select a methodology to evaluate a project's VMT, but requires lead agencies to document that methodology in the environmental document prepared for the project

CEQA lead agencies were required to comply with CEQA Guidelines Section 15064.3 no later than July 1, 2020.

California Vehicle Code Division 15, Chapters 1-5

Caltrans is responsible for planning, designing, building, operating, and maintaining California's transportation system. Caltrans sets standards related to transportation safety, design, performance, and accessibility. Specifically, California Vehicle Code Sections 35000-35796 include regulations pertaining to licensing, size, weight, and load of vehicles operated on highways.

California Streets and Highway Code Sections 660-771

Caltrans has the discretionary authority to issue special permits for the use of State highways for other-than-normal transportation purposes and reviews requests from utility companies, developers, and others desiring to conduct activities within State highway rights-of-way. Caltrans encroachment regulations would apply to construction of the proposed project facilities within and immediately adjacent to roadways, as well as the transportation of construction crews and construction equipment throughout the project area. Specifically, California Streets and Highway Code Sections 660-771 include regulations pertaining to transportation of oversized loads, certain materials, and construction-related roadway transportation disturbance.

4.18.3.2 Regional and Local Regulations

2020-2045 SCAG Regional Transportation Plan/Sustainable Communities Strategy

SCAG is the designated Metropolitan Planning Organization for San Bernardino, Riverside, Los Angeles, Orange, Imperial, and Ventura counties. On September 3, 2020, SCAG adopted its 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS presents the transportation vision for the SCAG region through the year 2045 and provides a long-term investment framework for addressing the region's transportation and related challenges. The RTP/SCS focuses on maintaining and improving the transportation system through a balanced approach and considers economic, environmental, public health, improved coordination between land-use decisions and transportation investments, and strategic expansion of the system to accommodate future growth. Specifically, the RTP/SCS vision is to locate

housing, jobs, and transit closer together; increase investment in transit and complete streets; and increase mobility options to achieve a more sustainable growth pattern.

San Bernardino County Long Range Transit Plan

SANBAG is the council of governments and transportation planning agency for San Bernardino County. In January 2017, SANBAG split into the San Bernardino County Transportation Authority (SBCTA) and San Bernardino Council of Governments (SBCOG). SBCOG and SBCTA are responsible for cooperative regional planning and furthering an efficient multi-modal transportation system countywide, respectively, and, thus, SBCTA supports freeway construction projects, regional and local road improvements, train and bus transportation, railroad crossings, call boxes, ridesharing, and long-term planning studies. The Long Range Transit Plan (LRTP) addresses the county's current and future travel challenges and provides a system of transit facilities and services that can increase transit's role in the future. The recommended LRTP began by developing and analyzing a wide range of alternatives designed to meet the needs of the county. Alternatives were developed based on the identification of major travel markets and their ability to generate potential ridership. The recommended LRTP for the county offers the best transit improvements to address growing travel demand anticipated through 2035.

County and City General Plans and Ordinances

Local regulations and ordinances vary widely in the Chino Basin. Transportation-related policies included in General Plans typically concern transportation resulting from project operation rather than project construction. However, some local jurisdictions incorporate restrictions within their general plans that pertain to construction activities in or through their jurisdictional areas, such as assigning construction truck routes or requiring the development and implementation of construction transportation management plans.

4.18.4 Thresholds of Significance

According to Appendix G, Section XVII, of the CEQA Guidelines, a project would have a significant effect on the environment if the project would cause a substantial adverse change in the significance of a TCR, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
d) Result in inadequate emergency access.

4.18.5 Potential Impacts

This section evaluates the potential impacts of the proposed CBP to transportation.

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

The primary plans that address the circulation system in the project area are the 2020-2045 SCAG RTP/SCS, San Bernardino County LRTP, and the various city and county general plans and

ordinances. These plans address various modes of transportation, including roadway vehicle, transit, bicycle, and pedestrian, and includes objectives and policies related to these modes of transportation. The roadways referenced above in Environmental Setting could be affected by commute trips by workers during construction and operations as well as truck trips during construction and operation of the proposed project.

Construction

During construction of the proposed project, there would be a temporary increase in heavy truck trips and construction worker vehicle trips on the existing regional and local roadway network in the project area. Construction-related trips would consist primarily of passenger cars and light duty pickup trucks used by construction workers, haul truck trips to export soil from the construction sites, and occasional movement of heavy equipment and materials to and from the construction sites. Construction vehicles would likely utilize I-15, I-10, and I-210 and SR-60 to access the project area. Construction roadway vehicles would also utilize arterial, collector, and local streets in Chino Hills, Chino, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, and unincorporated San Bernardino County to access the proposed water storage tank, advance water purification facility, well, pump station, and pipeline locations. **Table 4.18-** summarizes the anticipated vehicle trip generation related to proposed project construction activities.

Table 4.18-1
ESTIMATED PROJECT CONSTRUCTION VEHICLE TRIPS

Vehicle Trip Type	Project Category #	Construction Phase Description	Number of Round Trips (per day)
Construction Worker Trips	1	Wells	10 [1]
	2	Pipelines	42 [2]
	2	Turn Outs	14 [2]
	2	Pump Stations	5 [3]
	2	Water Storage Tank	12 [4]
	4	Advanced Water Purification Facility	20 [5]
	4	Wellhead Treatment Facilities	10 [6]
Materials/ Equipment/ Backfill Delivery and Water Truck Trips	1	Wells	31 [1]
	2	Pipelines	36 [2]
	2	Turn Outs	12 [2]
	2	Pump Stations	6 [3]
	2	Water Storage Tank	50 [4]
	4	Advanced Water Purification Facility	15 [5]
	4	Wellhead Treatment Facilities	10 [6]
	Daily Construction Vehicle Trips		**263**

Notes:

1 Installation of 37 new wells, (16 injection, 17 extraction, and 4 monitoring) would occur over 3 years. It is anticipated the wells would be drilled at different times and that drilling equipment would be transported to and from the sites on separate occasions. It is anticipated that delivery of the drilling equipment would occur 12 times in a year and result in twelve 50-mile round trips for the drill rigs. It is anticipated that five persons would be on a given well site at any one time to support well drilling. Daily trips to construct a well would average 15 round trips per day.

2 Installation of new pipelines and 6 turnout structures would occur over 3 years and involve use of a backhoe, crane, compactor, roller/vibrator, pavement cutter, grinder, haul truck, and 2 dump trucks operating 6 hours per day; a water truck and excavator operating 4 hours per day; and a paving machine and compacter operating 2 hours per day. Installation of

pipeline and turnout structures at undeveloped sites would use the same equipment without paving equipment (cutter, grinder, paving machine). For pipelines, it is assumed that 3 teams of 14 members would be installing pipelines per day, for a total of 14 worker roundtrips per day; additionally, the number of construction material/equipment/backfill delivery/water truck trips per day would be 12 per team or 36 per day. For turn outs it is assumed that 1 team of 14 members would be installing pipelines per day, for a total of 14 worker roundtrips per day; additionally, the number of construction material/equipment/ backfill delivery/water truck trips per day would be 12.

3 Installation of 4 pump stations (block buildings with a transformer) would entail grading and delivery and installation of equipment and materials. Construction would involve installation of piping/electrical equipment, excavation, structural foundation installation, pump house construction, pump/motor installation, and site completion. It is anticipated that grading activities will occur over a 5 day period and this phase of construction will result in 6 truck trips on the worst-case day with an average round trip of 20 miles delivering construction materials and equipment (concrete, steel, pipe, etc.). Installation would use a crane, forklift, backhoe, and front loader 4 hours per day. It is assumed that 5 workers would commute 40 miles round trip to the work site.

4 Installation of 1 new water storage tank would entail grading, foundation construction, and tank construction. During mass grading, materials would be imported for backfill and be delivered by trucks in the amount of about 300 trips, assuming 50 trips per day to and from the site, with a round trip length of approximately 50 miles. Fine grading would be completed after reservoir and piping installation and would involve approximately 5 to 12 workers over about 10 days. It is anticipated that approximately 5 to 12 workers would be on the site during foundation construction for approximately 25 days and that approximately 12 employees would be on the site during tank reservoir construction for approximately 50 days.

5 Installation of the advanced water purification facility would occur over 12 months and consist of site clearing, grading, construction of facilities, installation of equipment, and site completion. Construction equipment would include bulldozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and water truck. It is anticipated that the approximate number of construction personnel at a site on any given day would be 20 persons. The approximate number of truck deliveries is forecasted at 15 per day at 40-mile round trips per day of construction. Materials and equipment would be delivered to the site including piping, building materials, concrete forms, roofing materials, HVAC equipment, pumps, diffusers, screens, belt presses, and screw presses.

6 Installation of 3 wellhead treatment facilities located near multiple existing wells would each occur over 6 months and involve site demolition, site paving/grading, excavation and installation of yard pipes, installation of treatment facilities, site finishing (landscaping, curb/cutter), and site drainage. Construction equipment would include bulldozer or motor grader, backhoes, loaders, dump trucks, crew trucks, concrete trucks, cranes, personal vehicles, compactor, delivery trucks, and water truck. It is anticipated that the approximate number of construction personnel at a site on any day would be 10 persons. The approximate number of truck deliveries is forecasted at 10 per day at 40-mile round trips per day of construction.

Construction of the project would include installation of new wells, pipelines, turnout structures, pump stations, water storage tank, advanced water purification facility, and wellhead treatment facilities and would require construction equipment and construction worker roadway vehicle trips to and from related construction sites as detailed in **Table 4.18-1**. Access to the drilling and construction sites for support vehicles would be from adjacent roadways. Construction roadway vehicles on local streets and intersections could potentially disrupt roadway flows due to slower vehicle speeds and larger turning radii of trucks compared to passenger vehicles. However, based on a conservative assumption that the estimated number of construction vehicle trips by each project category would occur concurrently, and as shown in **Table 4.18-1**, daily roundtrip construction vehicle trips associated with the proposed project throughout the Chino Basin would be approximately 263 trips. As such, construction roadway vehicle trips in the project area would be minimal, temporary, and distributed on several roadways within the project area.

Potential installation of water conveyance pipelines under the Metrolink (San Bernardino and Riverside Lines) and Union Pacific Railroad tracks would be completed using horizontal directional drilling or jack-and-bore techniques. Metrolink and Union Pacific Railroad would require these construction activities to adhere to the applicable guidelines for utility installations underneath railroad rights-of-way as established by the most current version of the American Railway Engineering and Maintenance-of-Way Association Manual for Railway Engineering. These guidelines include standards for drilling procedures, depth of drilling, and construction monitoring of the ground, ballast, and track for movement during the pipeline drilling, reaming, and pullback processes. Train operations are permitted to continue throughout the duration of construction activities unless any movement is detected, at which point the installation process and all train movement must be immediately stopped, the damage reported to Metrolink or Union

Pacific Railroad, and the damaged area immediately repaired. The installation process must be reviewed and modified as required before the installation may proceed. Therefore, with compliance with applicable Metrolink and Union Pacific Railroad requirements, including American Railway Engineering and Maintenance-of-Way Association guidelines, temporary construction impacts to railroad operations would be less than significant. Once installed, the water conveyance pipelines would not result in an impact to railroad operations, because they would be located underground and designed in accordance with Metrolink and Union Pacific Railroad requirements.

Project construction would not conflict with adopted SCAG RTP/SCS, San Bernardino County Long Range Transit Plan, and general plans policies, plans, or programs regarding roadways, transit, bicycle, or pedestrian facilities, as project construction would not affect regional land use and transportation patterns or transit use. However, project construction could result in other short-term circulation effects such as temporary alteration of the movement and circulation of roadway vehicles, public transit, bicycles, and/or pedestrians within the project area, as lane and/or road closures could be required where water conveyance pipelines and any lateral connecting pipelines would be installed in public roadway rights-of-way and construction disturbance could traverse under existing transit, bicycle, and/or pedestrian thoroughfares.

Impacts would vary based on the component being installed as well as the configuration of the circulation system surrounding each of the impacted rights-of-way, such as the proximity of intersections and whether the right-of-way is a main thoroughfare. In addition, construction equipment and materials may be staged temporarily within the public right-of-way near construction areas, which may in turn impact transit stops, bicycle, and/or pedestrian facilities. Furthermore, construction activities associated with the water conveyance pipelines could also result in accidental damage to the existing roadway network, including pavement, curbs, gutters, sidewalks, and drainage structures. As a result, construction-related transportation circulation system impacts could be potentially significant. Implementation of Mitigation Measure (MM) **TRAN-1**, which includes development and implementation of a Construction Transportation Management Plan, would be required to reduce impacts to a less-than-significant level.

Operation

The proposed project would consist of operation of an advanced water purification facility, injection wells, extraction wells, groundwater treatment facilities, and a pipeline distribution network connecting the facilities to local agencies and Metropolitan for a water exchange with the SWP. Maintenance vehicles would continue to be utilized as needed by IEUA within the Chino Basin to access and maintain its various proposed facilities. Such facilities would include groundwater extraction and injection wells, booster pumps, water storage tanks, and brine disposal, as well as the pipelines connecting the recycled water supply, water purification system, purified water supply, and groundwater injection wells. Once most infrastructure is installed, operations would not require visits to the facilities unless unforeseen circumstances arise that would require maintenance or repair of the pipelines. In terms of routine maintenance, these trips would occur as needed and are anticipated to require one trip per maintenance event.

Public roadway rights-of-way and portions of the Chino Basin impacted during construction would be returned to pre-construction conditions upon completion. Water conveyance pipelines would be installed underground, and wells located in public rights-of-way would be installed in flush-mount vaults to allow vehicles to drive over. As a result, project components would not physically interfere with the transportation circulation system during project operation.

Project operations would not directly or indirectly induce population growth that could generate additional roadway, transit, bicycle, or pedestrian trips that could affect the circulation system, as the proposed project would protect and help maintain existing regional and State water supply rather than expand future water supplies (refer to Chapter 5, Topical Issues for a full discussion of the CBP's Growth Inducing Impacts). In addition, the proposed project would not result in a substantial addition of employees related to the proposed facilities operation. As such, project operation would not conflict with adopted SCAG RTP/SCS, San Bernardino County Long Range Transit Plan, and general plans policies, plans, or programs regarding roadways, transit, bicycle, or pedestrian facilities, because the proposed project is a water utility project rather than a land use project that could affect regional land use and transportation patterns, transit use, or local transportation policy implementation. Additionally, the proposed project would not result in other long-term circulation effects such as vehicle queue exceeding available storage, transit services or facilities disruption, or a hazardous condition that currently does not exist for pedestrians and bicyclists. Therefore, operational transportation circulation system impacts would be less than significant.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

TRAN-1 ***Prepare and Implement Construction Transportation Management Plan***
A construction Transportation Management Plan (TMP) shall be developed and implemented by IEUA in coordination with the respective jurisdictions, SBCTA, and/or other relevant parties during construction of the proposed project. The TMP shall conform to Caltrans' Transportation Management Plan Guidelines and shall include but is not limited to:

Construction Traffic Routes and Staging Locations: ***The TMP shall identify construction staging site locations and potential road closures, alternate routes for detours, and planned truck routes for construction-related vehicle trips, including but not limited to haul trucks, material delivery trucks, and equipment delivery trucks. It shall also identify alternative safe routes and policies to maintain safety along bicycle and pedestrian routes during construction. Construction vehicle routes shall avoid local residential streets and avoid peak morning and evening commute hours to the maximum extent practicable. Staging locations, alternate detour routes, and construction vehicle routes shall avoid other active construction projects within 0.25 mile of the project construction sites to the maximum extent practicable.***

Damage Repair: ***The TMP shall include the following requirements to minimize damage to the existing roadway network:***

- ***A list of precautionary measures to protect the existing roadway network, including but not limited to pavements, curbs, gutters, sidewalks, and drainage structures, shall be outlined. The construction contractor(s) shall be required to implement these measures throughout the duration of construction of the water conveyance pipelines.***
- ***The roadway network along the proposed water distribution alignment(s) shall be surveyed prior to the start of project construction activities, and existing roadway conditions shall be summarized in a brief report.***
- ***Any damage to the roadway network that occurs as a result of project construction activities shall be noted, and IEUA or its contractors shall repair all damage.***

Coordination with Emergency Services: ***The TMP shall include requirements to notify local emergency response providers, including relevant police and sheriff departments,***

ambulance services, and paramedic services at least one week prior to the start of work within public rights-of-way if lane and/or road closures are required. To the extent practicable, the duration of disruptions/closures to roadways and critical access points for emergency services shall be minimized.

Coordination with Active Transportation Facilities: ***The TMP shall require coordination with owners/operators of any affected active transportation facilities to minimize the duration of disruptions/closures to bike paths, pedestrian trails, and adjacent access points.***

Coordination with SBCTA: ***If the proposed project affects access to existing transit stops, the TMP shall also include temporary, alternative transit stops and directional signage, as determined in coordination with SBCTA and Metrolink.***

Coordination with Caltrans: ***If the proposed project requires lane and/or road closures of State highways or State highway ramps, the TMP shall require coordination with Caltrans to ensure the TMP conforms with Caltrans' Transportation Management Plan Guidelines.***

Coordination with Nearby Construction Sites: ***The TMP shall identify all active construction projects within 0.25 mile of project construction sites and require coordination with the applicants and/or contractors of these projects during all phases of construction regarding the following:***

- ***All temporary lane and/or roadway closures shall be coordinated to limit overlap of roadway closures***
- ***All major deliveries and haul truck trips shall be coordinated to limit the occurrence of simultaneous deliveries and haul truck trips***
- ***IEUA, its contractor(s), or its representative(s) shall meet on a regular basis with the applicant(s), contractor(s) or their representative(s) of active construction projects within 0.25 mile of the project construction sites during construction to address any outstanding issues related to construction vehicles.***

Transportation Control and Safety: ***The TMP shall provide for roadway vehicle control measures including flag persons, warning signs, lights, barricades, cones, and/or detour routes to provide safe passage of vehicular, bicycle, and pedestrian circulation and access by emergency responders.***

Plan Approval: ***The TMP shall be submitted to SBCTA and the respective city community development departments for review and approval.***

Level of Significance After Mitigation: Less Than Significant

MM **TRAN-1** would require implementation of designated construction roadway vehicle routes, damage repair procedures, and transportation control measures to minimize potential impacts to the movement and circulation of vehicles, public transit, bicycles, and/or pedestrians within the project area due to construction roadway vehicle volumes and lane and/or road closures during project construction. In addition, MM **TRAN-1** would require coordination with SBCTA and designation of alternative bicycle and pedestrian routes during project construction to compensate for impacts to transit stops and bicycle and pedestrian facilities. As a result, implementation of MM **TRAN-1** would reduce construction transportation circulation system impacts to a less-than-significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the Chino Basin continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the project area. This substantial increase from cumulative development is expected to result in significant cumulative impacts on the existing transportation systems. Because the construction activities associated with the CBP projects would increase construction traffic on the area roadways and potentially cause significant impacts, the CBP projects' contribution to cumulative impacts on roadways would be cumulatively considerable and a potential significant cumulative impact would occur. However, the implementation of MM **TRAN-1** would reduce the project's contribution to potential construction traffic impacts to less than significant. The above measure would require all construction activities to be conducted in accordance with an approved construction TMP, which would serve to reduce the construction-related traffic impacts to the maximum extent feasible. Thus, the proposed CBP would not contribute cumulatively considerable contributions to cumulative transportation circulation system impacts.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) identifies criteria for evaluating transportation impacts states that VMT exceeding an applicable threshold of significance may indicate a significant transportation impact. According to CEQA Guidelines Section 15064.3(b)(3), a lead agency may include a qualitative analysis of operational and construction transportation. Currently, official measures and significance thresholds related to VMT are currently being developed and have not yet been adopted by the cities of Chino Hills, Chino, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, or Rialto, or the County of San Bernardino. However, as discussed below, the project is not expected to permanently affect VMT in the study area based on guidance provided by the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (2018).

Construction

A VMT calculation is typically conducted on a daily or annual basis, for long-range planning purposes. As discussed under Response (a) above, construction vehicles on local roadways would be temporarily increased during project construction due to the presence of construction vehicles and equipment. Increases in VMT from construction would be short-term, minimal, and temporary. The duration of the potential significant impacts would be limited to the period of time needed to construct individual projects. As such, VMT standards, which are intended to monitor and address long-term transportation impacts resulting from future development, do not apply to temporary impacts associated with construction activities. Therefore, no construction impact associated with VMT per CEQA Guidelines Section 15064.3 would occur.

Operation

The proposed project would not cause substantial long-term/ongoing transportation effects, because proposed project facilities, once constructed, would only require maintenance activities similar to those that occur under existing conditions and the increase in employees due to the implementation of the proposed project is forecast to result in less than an estimated 15 new employees. During project operation, project-related roadway vehicle trips would include daily employee trips to and from the proposed AWPF. The Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (2018) states, "Projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-

significant VMT impact." As discussed under Response (a), scheduled maintenance visits would also occur in the future with one trip per maintenance event, with occasional trips also occurring when unforeseen circumstances arise that would require maintenance or repair of certain facilities. As such, the proposed project would generate less than 110 trips per day, which is the recommended screening threshold. Therefore, the proposed project would not result in a substantial addition of VMT per service population or induce additional roadway vehicle travel by increasing physical roadway capacity or adding new roadways to the network. Therefore, no operational impact associated with VMT per CEQA Guidelines Section 15064.3 would occur.

Combined Project Categories

Level of Significance Before Mitigation: Less Than Significant

Mitigation Measures: None required.

Level of Significance After Mitigation: Less Than Significant

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the Chino Basin continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the project area. This substantial increase from cumulative development is expected to result in significant cumulative vehicle miles travelled. As described above, the CBP project's contribution to cumulative vehicle miles travelled would be less cumulatively considerable considering the proposed operation of the CBP screens out of the designated VMT threshold, and therefore a less than significant cumulative impact would occur.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction

During construction, the proposed project could temporarily change the built configuration of intersections and roadways within the project area. Lane and/or road detours or closures may be required where water conveyance pipelines and wells would be installed within public rights-of-way. Construction equipment and materials may be staged temporarily within the public rights-of-way. Lane detours or closures have the potential to increase conflicts between vehicles, bicyclists, and pedestrians; however, implementation of existing regulations and policies for road closures and lane detours within the cities of Chino Hills, Chino, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, and San Bernardino County or along Caltrans facilities would reduce the potential for project construction to increase hazards in the project area. However, although construction of the CBP facilities could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, the change to the mix of vehicles would stop when project construction is completed. The potential conflicts between construction trucks and automobiles on local roadways are considered a less than significant impact through implementation of MM **TRAN-1**.

Operation

The proposed project would not include alterations to existing roadway alignments or intersections in the project area, and therefore, would not include sharp curves or unsafe designs that would increase transportation-related hazards. The proposed facilities, such as the advanced water

purification facility, may include new driveway access points; however, design of such driveways would be required to comply with local codes and standards for ingress and egress for the cities of Chino Hills, Chino, Montclair, Upland, Ontario, Rancho Cucamonga, Fontana, Eastvale, and Rialto, and San Bernardino County. As such, the proposed project would not create a hazardous condition that currently does not exist for motorists, transit riders, pedestrians, or bicyclists nor would it include incompatible uses for the project area. Therefore, no operational impacts related to transportation hazards would occur.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of MM **TRAN-1** is required to achieve a less than significant impact.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction TMP. As a result, implementation of MM **TRAN-1** would reduce construction transportation circulation system impacts to a less-than-significant level.

Cumulative Impact Analysis

The Chino Basin service area is largely urbanized with residential, commercial and industrial development. As the service area continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. This increase in cumulative traffic volumes could result in significant hazard impacts. Because the proposed construction activities associated with the CBP projects could temporarily increase the type of vehicles (i.e., trucks) that could be incompatible with predominantly automobile vehicles on local roadways, potential conflicts between construction trucks and automobiles could result in significant traffic hazard impacts. The implementation of MM **TRAN-1** would reduce the project's contribution to potential construction traffic hazard impacts to less than significant. The above measure would reduce traffic hazards by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan. Thus, the proposed CBP would not contribute cumulatively considerable contributions to cumulative traffic related hazards and incompatible use impacts.

d) Would the project result in inadequate emergency access?

Construction

Project construction activities would have temporary effects on roadway vehicle flow and lane configurations at specific intersections and roadways due to potential lane and/or road closures, which would potentially impact emergency access and response times in the project area. Construction activities could also temporarily block access to some roadways and driveways that are currently used by emergency response vehicles or in emergency evacuations. Therefore, construction impacts related to emergency access would be potentially significant. Implementation of MMs **TRAN-1** and **WF-1**, which include the development and implementation of a TMP and TCP, would be required to reduce impacts to a less than significant level.

Operation

Operation of the proposed project would not block roadways or driveways, and emergency access to the proposed facilities, such as the advanced water purification facility, would be provided in accordance with applicable regulations, such as the California Fire Code, and submitted for review to the applicable local agency(ies). As such, the proposed project would provide at least two separate apparatus access roads for proposed facilities requiring regular employee presence with the fire apparatus access roads having a minimum width of 20 feet and a minimum turning radii of 25 feet inside and 45 feet outside. Therefore, operational impacts related to emergency access would be less than significant.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Implementation of MM **TRAN-1** and **WF-1** is required to achieve a less than significant impact. MM **WF-1** is repeated below for reference.*

***WF-1**:* ***Prior to initiating construction of proposed facilities within public rights-of-way (ROW), IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW**.*

Level of Significance After Mitigation: Less Than Significant

MMs **TRAN-1** and **WF-1** would require implementation of transportation control measures and coordination with emergency response providers to minimize impacts to emergency access in the project area due to lane and/or road closures during project construction. As a result, implementation of MMs **TRAN-1** and **WF-1** would reduce construction impacts related to emergency access to a less than significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial and industrial development. As the continues to develop, the addition of more residential, commercial, and industrial development is expected to substantially increase traffic volumes on roadways within the service area. Cumulative construction activities are expected to increase construction vehicles travelling on the roadways. While individual emergency vehicles could be slowed if travelling behind a slow-moving truck, per vehicle code requirements, vehicles must yield to emergency vehicles using a siren and red lights. Cumulative construction vehicles travelling along the roadways are expected to result in a less than significant impact on emergency access.

The implementation of some of the cumulative projects within the Chino Basin could result in lane closures during construction activities. Lane closures due to cumulative construction activities

could result in potential access impacts on emergency vehicles. As such, implementation of MM **TRAN-1** would reduce the project's cumulative contribution to potential construction impacts on emergency access to a less than significant impact. The above measure would reduce impacts on emergency access by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan and require coordination of timing, location, and duration of construction activities with emergency services such as police and fire.

4.18.6 Cumulative Impacts

4.18.6.1 Construction Impacts

Overlapping cumulative construction activities, simultaneous lane/road closures, and simultaneous staging of construction equipment and materials in public rights-of-way could result in cumulative construction impacts related to transportation circulation patterns in the project area, transit stops, bicycle and pedestrian facilities, and/or emergency access. Cumulative construction activities are expected to increase construction vehicles traveling on the roadways. While individual emergency vehicles could be slowed if traveling behind a slow-moving truck, vehicle codes require vehicles to yield to emergency vehicles using a siren and red lights. As such, cumulative impacts related to construction transportation circulation and emergency access within Chino Basin would be potentially significant. However, the proposed project would be required to implement MM **TRAN-1**, which requires coordination with other active construction projects within 0.25 mile of project construction sites to minimize simultaneous lane and/or road closures, major deliveries, and haul truck trips. MM **TRAN-1** also requires designating alternate detour routes and construction transportation routes that avoid these projects to the maximum extent practicable. Similarly, MM **WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, with mitigation incorporated, the proposed project would not have a cumulatively considerable contribution to the significant cumulative impact related to construction transportation circulation and emergency access.

4.18.6.2 Operational Impacts

Operations related to buildout of cumulative development within the project area, including the projects assumed under buildout of the various jurisdictions' general plans within the Chino Basin, would increase cumulative operational roadway vehicle volumes on local roadways. The cumulative increase in roadway vehicle volumes would have the potential to increase cumulative operational VMT in the project area. As such, cumulative impacts related to operational transportation circulation and VMT within Chino Basin would be potentially significant. However, project-related VMT would be negligible in comparison to the high volumes of VMT generated by the types of residential, commercial, and industrial projects assumed under buildout of the various jurisdictions' general plans within the Chino Basin. Therefore, the proposed project would not have a cumulatively considerable contribution to the significant cumulative impact related to operational transportation circulation and VMT.

4.18.7 Significant and Unavoidable Impacts

As determined in the preceding environmental evaluation, with the implementation of MMs **TRAN-1** and **WF-1**, no significant and unavoidable impacts relating to land use and planning would occur as a result of implementing the proposed project, and the project's potential impacts on transportation will be less than significant.

4.19 TRIBAL CULTURAL RESOURCES

4.19.1 Introduction

This subchapter evaluates the potential environmental impacts to tribal cultural resources from implementation of the proposed project. In response to the Assembly Bill (AB) 52 consultation initiated in September 2021, the three Tribes that were notified (Gabrieleño, Morongo, and San Manuel) requested consultation. IEUA Staff initiated consultation and reached agreement with all three Tribes to incorporate mitigation to address implementation of specific projects under the CBP as they are proposed for site-specific implementation. The Tribes requested updated archaeological evaluations at the time individual project components move forward in line with current standards and requested the opportunity to participate in updated evaluations as well as an opportunity to monitor ground-disturbing activities on native soil in site-specific circumstances.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Tribal Cultural Resources
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- IEUA Facilities Master Plan Final Environmental Impact Report (SCH#2016061064), February 2017 prepared by ESA (2017 FMP EIR)
- CRM TECH, Memorandum: Cultural Resource Survey, Proposed AWPF at RP-4, City of Rancho Cucamonga, October 17, 2021 (provided as Appendix 7 to Volume 2 of this DPEIR)

One comment letter regarding tribal cultural resources issues was raised as part of the Notice of Preparation. No comments were received at the scoping meeting held for the proposed Project.

Comment Letter #2 from Native American Heritage Commission (NAHC) (dated 9/20/21) states:

- *This letter summarizes the applicability of AB 52 and SB 18 to a given project.*
- *This letter summarizes AB 52 requirements.*
- *This letter summarizes SB 18 requirements.*
- *This letter summarizes recommendations for Cultural Resource Assessments as follows:*
    - *The IEUA should contact the appropriate California Historical Research Information System (CHRIS) Center for an archaeological records search*
    - *Archaeological surveys, where required, should be prepared in a professional report.*
    - *The NAHC should be contacted for a sacred lands file search and to procure a Native American Tribal Consultation List*
    - *Lack of surface evidence does not preclude the existence of subsurface evidence and as such, the IEUA should include mitigation that addresses the potential for inadvertent discovery, provisions for the deposition of cultural items, and include provisions for the treatment and disposition of native American human remains.*

Responses to these comments can be found in Subsection 2.2.1 in the Introduction provided as Chapter 2 to this DPEIR. Additionally, most responses point to text that can be found in this Subchapter.

4.19.2 Environmental Setting: Tribal Cultural Resources

The Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and San Manuel Band of Mission Indians are Tribes with a cultural history in the region served by IEUA.

Prehistory/Ethnohistory

The Chino Basin region lies mostly within the traditional territory of the Gabrieleño, a Native American group believed to have been the most populous and most powerful ethnic nationality in aboriginal Southern California. Gabrieleño territory was centered in the Los Angeles Basin, but their influence spread as far as the San Joaquin Valley, the Colorado River, and Baja California. The Gabrieleño's territorial claim in the Riverside-San Bernardino County portion of the planning area overlapped another prominent Native American group, the Serrano, whose traditional homeland was centered in the San Bernardino Mountains, including the slopes and lowlands on the northern and southern flanks of the mountains and extended eastward as far as present-day Twentynine Palms.

Depending on the natural environment in which they were located, native groups adopted different types of subsistence economies, although they were all based on gathering, hunting, and/or fishing. As a result, ancient occupation sites in valleys and foothills often contain portable mortars and pestles along with large projectile points, suggesting a reliance on fleshy nut foods and, to a lesser extent, large game animals. Sites found in the more arid areas in inland Southern California often contain fragments of flat slab metates and plano-convex scrapers along with numerous projectile points, suggesting a reliance on seed resources, plant pulp, and smaller game animals. Temporary use sites tended to be clustered around bay/estuary environments and intermontane drainages such as the Santa Ana River.

The Gabrieleño came into contact with the Spanish as early as 1542, during the expedition of Juan Rodríguez Cabrillo. In the early Spanish period, several Indian villages or rancherías were known to be present amid the foothills and valleys on the southern slopes of the San Gabriel and San Bernardino Mountains. Beginning in 1769, the Spaniards took steps to colonize Gabrieleño territory. In the process, most of the Gabrieleño people were incorporated into Mission San Gabriel and other missions in Southern California.

Due to their location further inland and mostly at higher elevations, Spanish influence on Serrano lifeways was minimal until the 1810s, when an assistencia affiliated with Mission San Gabriel was established in present-day Loma Linda, on the southern edge of the Serrano territory. Between then and the end of the mission era in 1834, most of the Serrano in the San Bernardino Mountains were also moved to the nearby missions.

Due to introduced diseases, dietary deficiencies, and forceful reduction, Gabrieleño and Serrano populations dwindled rapidly. By 1900, the Gabrieleño had almost ceased to exist as a culturally identifiable group, according to the leading ethnohistoric accounts. The Serrano, meanwhile, were mostly settled on the San Manuel and the Morongo Indian Reservations. In modern times, there has been a renaissance of Native American activism and cultural revitalization among the

Gabrieleño and the Serrano. Tribal members today are keenly aware of archaeological sites and places of special cultural significance and maintain a high level of interest in how these sites are managed.

4.19.3 Regulatory Setting

Federal, State, and local laws, regulations, plans, or guidelines that are applicable to the proposed project are summarized below.

4.19.3.1 Federal Regulations

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a Federal law passed in 1990 that provides a process for museums and Federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants, and culturally affiliated Indian Tribes.

4.19.3.2 State

Public Resources Code

Archaeological resources are protected pursuant to a wide variety of State policies and regulations enumerated under the California Public Resources Code. In addition, cultural resources are recognized as a non-renewable resource and therefore receive protection under the California Public Resources Code and CEQA.

- California Public Resources Code (PRC) Sections 5097.9–5097.991 provides protection to Native American historical and cultural resources, and sacred sites and identifies the powers and duties of the Native American Heritage Commission (NAHC). It also requires notification to descendants of discoveries of Native American human remains and provides for treatment and disposition of human remains and associated grave goods.

- PRC Section 5097.9 states that no public agency or private party on public property shall "interfere with the free expression or exercise of Native American Religion." The code further states that:

  > No such agency or party [shall] cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine…except on a clear and convincing showing that the public interest and necessity so require. County and city lands are exempt from this provision, except for parklands larger than 100 acres.

Health and Safety Code

The discovery of human remains is regulated per California Health and Safety Code Section 7050.5, which states:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation…until the coroner…has determined…that the remains are not subject to…provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains

> have been made to the person responsible…. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and…has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Assembly Bill 52

The Native American Historic Resource Protection Act (AB 52) took effect July 1, 2015, and incorporates tribal consultation and analysis of impacts to tribal cultural resources (TCR) into the CEQA process. It requires TCRs to be analyzed like any other CEQA topic and establishes a consultation process for lead agencies and California Tribes. Projects that require a Notice of Preparation of an EIR or Notice of Intent to adopt a Negative Declaration (ND) or Mitigated Negative Declaration (MND) on or after July 1, 2015, are subject to AB 52. A significant impact on a TCR is considered a significant environmental impact under CEQA, requiring feasible mitigation measures.

TCRs must have certain characteristics:

1) Sites, features, places, cultural landscapes (must be geographically defined), sacred places, and objects with cultural value to a California Native American Tribe that are either included or determined to be eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources. (PRC) § 21074(a)(1).)

2) The lead agency, supported by substantial evidence, chooses to treat the resource as a TCR. (PRC § 21074(a)(2).)

The first category requires that the TCR qualify as a historical resource according to PRC Section 5024.1. The second category gives the lead agency discretion to qualify that resource—under the conditions that it support its determination with substantial evidence and consider the resource's significance to a California Tribe. The following is a brief outline of the process (PRC §§ 21080.3.1–21080.3.3):

1) A California Native American Tribe asks agencies in the geographic area with which it is traditionally and culturally affiliated to be notified about projects. Tribes must ask in writing.

2) Within 14 days of deciding to undertake a project or determining that a project application is complete, the lead agency must provide formal written notification to all Tribes who have requested it.

3) A Tribe must respond within 30 days of receiving the notification if it wishes to engage in consultation.

4) The lead agency must initiate consultation within 30 days of receiving the request from the Tribe.

5) Consultation concludes when both parties have agreed on measures to mitigate or avoid a significant effect to a TCR, OR a party, after a reasonable effort in good faith, decides that mutual agreement cannot be reached.

6) Regardless of the outcome of consultation, the CEQA document must disclose significant impacts on TCRs and discuss feasible alternatives or mitigation measures that avoid or lessen the impact.

4.19.4 Thresholds of Significance

According to Appendix G, Section XVIII, of the CEQA Guidelines, a project would have a significant effect on the environment if the project would cause a substantial adverse change in the significance of a TCR, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

4.19.5 Potential Impacts

This subchapter evaluates the level of adverse impact to the TCRs that are forecast to occur if the CBP is implemented as proposed.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

The Gabrieleño Band of Mission Indians - Kizh Nation, Morongo Band of Mission Indians, and San Manuel Band of Mission Indians were contacted by IEUA under AB 52. Only the San Manuel Band of Mission Indians (San Manuel or Tribe) requested continued participation with the CBP CEQA process and future projects implemented under the CBP. Concerns expressed include the following: accidental exposure of subsurface cultural resources and proper management of such resources; concerns over exposure of human remains and proper management; and presence of Native American monitors during future ground disturbing activities. Through incorporation of mitigation measures provided below, IEUA concludes that the requests of the Tribe will be met under the CBP umbrella.

According to the findings in the cultural resources study (Subchapter 4.6), the proposed project has a modest potential to impact (alter or destroy) a TCR. Based on the research results summarized above and direct experience with the Tribe, many of the CBP infrastructure projects have a potential to expose subsurface resources. Mitigation is identified below that will be implemented by future CBP specific projects. These measures are intended to address concerns expressed by the San Manuel Band of Mission Indians, which responded to IEUA's AB 52 consultation process. Therefore, potentially significant impacts may affect TCRs, but with implementation of the mitigation identified below, such potential impacts can be mitigated to a less than significant impact level.

4.19.6 Mitigation Measures

To minimize future impacts on TCRs, the following mitigation measures will be implemented. These measures have been developed to implement as a hierarchy, with Mitigation Measure (MM) **TCR-1** being the first level of mitigation implementation for projects that would be located within existing disturbed facilities, MM **TCR-2** the second level requiring notification of the San Manuel Band of Mission Indians to determine whether the Tribe would like to consult, and MM **TCR-3** the third level to be implemented requiring archaeological monitoring and testing, treatment of cultural resources, and inadvertent discoveries of human remains and/or funerary objects, which has been provided at the request of the San Manuel Band of Mission Indians as part of the AB 52 consultation conducted on behalf of the CBP.

TCR-1 ***Where a future discretionary project requiring additional CEQA review occurs within an existing facility that has been totally disturbed due to it undergoing past engineered site preparation (such as a well site, water treatment facility, or wastewater treatment plant site), IEUA shall notify the San Manuel Band of Mission Indians, but will point out that the project falls under the CBP evaluation and that the site is fully developed. No further cultural resources or TCR investigation will be conducted unless the Tribe identifies specific TCR resources/values at such site(s).***

TCR-2 ***Where a future discretionary project requiring additional CEQA review occurs at an undisturbed site, IEUA shall notify the San Manuel Band of Mission Indians (SMBMI) to provide the Tribe with an opportunity to consult on the project. The provisions of CUL-2 through CUL-4, as well as TCR-3 shall then be followed through.***

TCR-3 ***If the San Manuel Band of Mission Indians (SMBMI) request to consult, the terms of the Mitigation Measures provided by the Tribe shall be applied to the project, where applicable, and as follows:***

SM-CUL-1

Archaeological Monitoring and Testing
At least one archaeologist with at least 3 years of regional experience in archaeology and a Tribal monitor representing the San Manuel Band of Mission Indians shall conduct subsurface archaeological testing on the project site via the employ of a number of subsurface investigative methods, including shovel test probes, remote sensing, and/or deep testing via controlled units or trenching of appropriate landscapes, with a sample size of at least 25% of the area of concern dug and dry-sifted through 1/8-inch mesh screens, prior to any ground-disturbing activity. A Testing Plan shall be created by the archaeologist and submitted to the SMBMI and IEUA for review at least 10 business days prior to implementation, so as to provide time to review/modify the Plan, if needed. The Plan shall outline the protocol of presence/absence testing and contain a Treatment Plan

detailing that 1) no collection of artifacts or excavation of features shall occur during testing, and 2) all discovered resources shall be properly recorded and reburied in situ.

If the results of testing, as approved by SMBMI, are positive, then SMBMI and IEUA shall, in good faith, consult concerning appropriate treatment of the finding(s), guidance for which is outlined in SM-TCR-1.

If the results of testing, as approved by SMBMI, are negative, then SMBMI will conclude consultation unless any discoveries are made during project implementation. Any and all discoveries made during project implementation shall be subject to the Treatment Plan outlined within the Testing Plan developed as described above and the guidelines contained in SM-TCR-1.

If resources are identified during testing as described above, an archaeological monitor and a Tribal monitor from SMBMI with at least 3 years of regional experience in archaeology shall be present for all ground-disturbing activities that occur within the proposed project area (which includes, but is not limited to, tree/shrub removal and planting, clearing/grubbing, grading, excavation, trenching, compaction, fence/gate removal and installation, drainage and irrigation removal and installation, hardscape installation [benches, signage, boulders, walls, seat walls, fountains, etc.], and archaeological work). A sufficient number of monitors shall be present each work day to ensure that simultaneously occurring ground disturbing activities receive thorough levels of monitoring coverage. A Monitoring and Treatment Plan that is reflective of the project mitigation ("Cultural Resources" and "Tribal Cultural Resources") shall be completed by the archaeologist and submitted to the IEUA for dissemination to the SMBMI. Once all parties review and approve the plan, it shall be adopted by the IEUA – the plan must be adopted prior to permitting for the project. Any and all findings will be subject to the protocol detailed within the Monitoring and Treatment Plan.

SM-TCR-1

Treatment of Cultural Resources
If a pre-contact cultural resource is discovered during archaeological presence/absence testing, the discovery shall be properly recorded and then reburied in situ. A research design shall be developed by the archaeologist that shall include a plan to evaluate the resource for significance under CEQA criteria. Representatives from the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI), the archaeologist, and the IEUA shall confer regarding the research design, as well as any testing efforts needed to delineate the resource boundary. Following the completion of evaluation efforts, all parties shall confer regarding the archaeological significance of the resource, its potential as a Tribal Cultural Resource (TCR), avoidance (or other appropriate treatment) of the discovered resource, and the potential need for construction monitoring during project implementation. Should any significant resource and/or TCR not be a candidate for avoidance or preservation in place, and the removal of the resource(s) is necessary to mitigate impacts, the research design shall include a comprehensive discussion of sampling strategies, resource processing, analysis, and reporting protocols/obligations. Removal of any cultural resource(s) shall be conducted with the presence of a Tribal monitor representing the Tribe, unless otherwise decided by SMBMI. All plans for analysis shall be reviewed and approved by IEUA and SMBMI prior to implementation, and all removed material shall be temporarily curated on-site. It is the preference of SMBMI that removed cultural material be reburied as close to the original find location as possible. However, should reburial within/near the original find location during project implementation not be feasible, then a reburial location for future reburial shall be decided upon by SMBMI and the IEUA, and all finds shall be reburied within this location. Additionally, in this case, reburial shall not occur until all ground-disturbing activities

associated with the project have been completed, all monitoring has ceased, all cataloguing and basic recordation of cultural resources have been completed, and a final monitoring report has been issued to IEUA, CHRIS, and SMBMI. All reburials are subject to a reburial agreement that shall be developed between the landowner and SMBMI outlining the determined reburial process/location, and shall include measures and provisions to protect the reburial area from any future impacts (vis a vis project plans, conservation/preservation easements, etc.).

Should it occur that avoidance, preservation in place, and on-site reburial are not an option for treatment, the landowner shall relinquish all ownership and rights to this material and confer with SMBMI to identify an American Association of Museums (AAM)-accredited facility within the County that can accession the materials into their permanent collections and provide for the proper care of these objects in accordance with the 1993 CA Curation Guidelines. A curation agreement with an appropriate qualified repository shall be developed between the landowner and museum that legally and physically transfers the collections and associated records to the facility. This agreement shall stipulate the payment of fees necessary for permanent curation of the collections and associated records and the obligation of the Lead Agency/Developing Agency to pay for those fees.

All draft records/reports containing the significance and treatment findings and data recovery results shall be prepared by the archaeologist and submitted to the IEUA and SMBMI for their review and comment. After approval from all parties, the final reports and site/isolate records are to be submitted to the local CHRIS Information Center, the IEUA, and SMBMI.

SM-TCR-2

Inadvertent Discoveries of Human Remains/Funerary Objects
In the event that any human remains are discovered within the project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately who shall notify SMBMI and the IEUA. The IEUA shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD, and IEUA to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The IEUA should accommodate on-site reburial in a location mutually agreed upon by the Parties.

It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and IEUA, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

Implementation of these measures will reduce potential TCR impacts to a less than significant impact level.

4.19.7 Cumulative Impacts

As determined above, CBP implementation can proceed without causing any unavoidable significant adverse impacts to TCRs. Implementation of the proposed project is not forecast to cause any direct, significant adverse impact to any site specific TCRs following implementation of identified mitigation measures, and as a result the proposed project has no potential to make a cumulatively considerable contribution to TCR impacts in the project area, i.e., the Chino Basin. This is because impacts to individual TCRs at specific sites would be mitigated and site specific as such, the proposed project's contribution to cumulative impacts, whether significant or mitigated below significance thresholds, would not be cumulatively considerable. Any TCRs discovered on a project site that would be adversely impacted by proposed future projects would be mitigated by implementing one or more of the three mitigation measures listed above. With implementation of the appropriate measures, CBP projects are not forecast to cause or contribute to cumulatively considerable tribal cultural resource impacts.

4.19.8 Significant and Unavoidable Impacts

As determined above, no significant and unavoidable impacts to TCRs will occur as a result of implementing the proposed project, and the project's potential impacts on tribal cultural resources will be less than significant.

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4.20 UTILITIES AND SERVICE SYSTEMS

4.20.1 Introduction

This Subchapter evaluates the environmental impacts to the issue area of utilities and service systems from implementation of the CBP. Utilities within the Chino Basin are provided by a mix of public agencies, such as IEUA—the lead agency for this project, IEUA member agencies, and other private companies, such as Southern California Edison (SCE).

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Utilities and Service Systems
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

The following references were used in preparing this Subchapter of the DPEIR.

- Administration, U.S. Energy Information. California State Profile and Energy Estimates. Accessed 10/1/21 at: https://www.eia.gov/state/data.php?sid=CA#ConsumptionExpenditures
- California Energy Commission. Transportation Energy Demand Forecast 2018-2030. 2018.
- Alternate Fuels Data Center. U.S. Department of Energy. Accessed 10/1/21 at: https://afdc.energy.gov/states/ca
- U.S. Energy Information Administration. California Energy Consumption by End-Use Sector. California State Profile and Energy Estimates. Accessed 10/1/21 at: https://www.eia.gov/state/?sid=CA#tabs-2.
- Jet fuel consumption, price, and expenditure estimates, 2017. U.S. Energy Information Administration. Accessed 10/1/21 at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_jf.html.
- State Profile Data: California. U.S. Energy and Information Administration. Accessed 10/1/21 at: https://www.eia.gov/state/data.php?sid=CA.
- City of Chino Hills, 2020 Urban Water Management Program, 2021
- City of Ontario, 2020 Urban Water Management Program, 2021
- City of Pomona, 2020 Urban Water Management Program, 2021
- City of Upland, 2020 Urban Water Management Program, 2021
- Cucamonga Valley Water District, 2020 Urban Water Management Program, 2021
- Fontana Water Company, 2020 Urban Water Management Program, 2021
- IEUA, FMP PEIR, 2017
- IEUA, Draft Optimum Basin Management Program Update EIR, 2020
- Monte Vista Water District, 2020 Urban Water Management Program, 2021
- Jurupa Community Services District, 2020 Urban Water Management Program, 2021
- Water Systems Consulting, Inc. [West Valley Water District et. al.], 2020 San Bernardino Valley Regional Urban Water Management Program, 2021
- IEUA, 2020 Urban Water Management Program, 2021
- Water Facilities Authority Website, Accessed 10/1/21 at: http://www.wfajpa.org/
- 2020 Draft Optimum Basin Management Program Update EIR
- WEI on behalf of Chino Basin Watermaster, Final 2020 Storage Management Plan. December 2019.
- City of Riverside, Riverside Water Quality Control Plant Website. Accessed 10/1/21 at: https://www.riversideca.gov/publicworks/sewer/wqcp.asp

- Jurupa Community Services District, Sewer and Wastewater Website. Accessed 10/1/21 at: https://www.jcsd.us/customers/sewer-wastewater
- Western Riverside County Regional Wastewater Authority, Treatment Plant Overview Website. Accessed 10/1/21 at: https://www.wrcrwa.org/152/Treatment-Plant-Overview
- California Department of Resources Recycling and Recovery, Solid Waste Information System (SWIS), 2021
- California Energy Commission, 2018 Total System Electrical Generation Website. Accessed 10/1/21 at: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html

No comments specific to this topic were received in response to the Notice of Preparation. No comments were received at the scoping meeting held for the proposed project.

Information contained in this Subchapter is supported by the "Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program" and the "Addendum to the Evaluation of the Chino Basin Program/ Water Storage Investment Program," both dated October 15, 2021 and prepared by West Yost (West Yost TM). The West Yost TM and Addendum are provided as Appendix 4, Volume 2 to this DPEIR.

4.20.2 Environmental Setting: Utilities & Service Systems

4.20.2.1 Water

Please refer to the discussion under Hydrology and Water Quality provided as Subchapter 4.11.

Chino Basin Watermaster

As stated in the Project Description, the 1978 Judgment adjudicated the groundwater rights of the Chino Basin, and established the Watermaster—a Court-created entity—to administer the Judgment, and contains a Physical Solution to meet the requirements of water users having rights in or dependent upon the Chino Basin. Growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural uses and vacant land, the water demands of the Chino Basin Parties[1] are expected to increase. The table below summarizes the actual (2015) and projected water demands, water supply plans, and population through 2040. Total water demand is projected to grow from about 290,000 acre-feet per year (AFY) in 2015 to about 420,000 AFY by 2040, an increase of about 130,000 AFY. The projected growth in water demand through 2040 is driven by the Appropriative Pool Parties, some of which will serve new urban water demands created by the conversion of agricultural uses and vacant land to urban uses.

Table 4.20-1
AGGREGATE WATER SUPPLY PLAN FOR WATERMASTER PARTIES: 2015 TO 2040

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Volume (af)						
Chino Basin Groundwater	148,467	139,236	144,314	151,525	164,317	173,522
Non-Chino Basin Groundwater	51,398	55,722	61,741	63,299	64,991	66,783
Local Surface Water	8,108	19,653	19,653	19,653	19,653	19,653
Imported Water from Metropolitan	53,784	90,444	97,657	103,684	105,152	111,036
Other Imported Water	8,861	9,484	10,095	10,975	11,000	11,000

[1] The Chino Basin Watermaster functions as a unique entity that has been created by the court. Basin Watermaster is composed of a Board that consists of member agencies from three groups: an Appropriative Pool, Non-Appropriative Pool, and Agricultural Pool, and four other public agencies (see below), effectively the water producers in the Chino Basin. These entities are collectively known as the Chino Basin Parties or stakeholders.

Water source	2015 (Actual)	2020	2025	2030	2035	2040
Recycled Water for Direct Reuse	17,554	23,678	24,323	26,910	30,451	33,953
Total	**288,171**	**338,218**	**357,782**	**376,046**	**395,564**	**415,947**
Percentage						
Chino Basin Groundwater	52%	41%	40%	40%	42%	42%
Non-Chino Basin Groundwater	18%	16%	17%	17%	16%	16%
Local Surface Water	3%	6%	5%	5%	5%	5%
Imported Water from Metropolitan	19%	27%	27%	28%	27%	27%
Other Imported Water	3%	3%	3%	3%	3%	3%
Recycled Water for Direct Reuse	6%	7%	7%	7%	8%	8%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Population (million)*	1.95	2.07	2.21	2.38	2.57	2.73

Source: *Final 2020 Storage Management Plan*. December 2019.
*The population projection is based on the service area population of all Chino Basin Appropriative Pool agencies. For some Appropriative Pool agencies, the service areas expand outside of the Chino Basin.

Water Agencies

Inland Empire Utilities Agency

IEUA is a regional wholesale water supplier, providing imported water from Metropolitan Water District of Southern California (MWD) and a regional wastewater treatment agency. As described in the Project Description, IEUA provides the wholesale imported water from MWD to seven retail agencies: the cities of Chino, Chino Hills, Ontario, and Upland; Cucamonga Valley Water District (CVWD), located in the City of Rancho Cucamonga; Fontana Water Company (FWC), located in the City of Fontana; and the Monte Vista Water District (MVWD), located in the City of Montclair. IEUA served approximately 906,046 people in 2020, over 242 square miles in western San Bernardino County.

As stated in the Project Description, approximately 25 percent of the water used in the region is imported from MWD through the State Water Project (SWP). Due to water quality limitations (salinity, total dissolved solids [TDS]) and operation of the regional recycled water program, IEUA only takes water from the SWP.

A diverse portfolio of water supply sources has been developed within IEUA's service area. The region relies on groundwater from the Chino Basin and other basins (Cucamonga, Rialto, Lytle Creek, Colton, and the Six Basins groundwater basins), local surface water from creeks originating in the San Gabriel Mountains, recycled water produced locally, and imported water from the SWP via MWD. **Table 2** (extracted from the Project Description) below provides the current and projected recycled water supplies in AFY through 2040.

Table 2
CURRENT AND PROJECTED RECYCLED WATER SUPPLIES (AFY)

Recycled Water Supply	2020	2025	2030	2035	2040
	55,074[1]	60,150	63,530	64,500	67,140
NOTES: For 2020, this amount is the actual supply. For 2025 to 2040, supply projections are from IEUA 2021 Wastewater and Recycled Water Demand Forecasts based on land use.					

Current and projected recycled water demands through 2040 are provided in **Table 3** (extracted from the Project Description) below. Recycled water demands include direct use, groundwater recharge, and Santa Ana River discharge obligations.

Table 3
CURRENT AND PROJECTED RECYCLED WATER DEMAND (AFY)

	2020	2025	2030	2035	2040
Direct Use Demands[1]	16,278	20,870	23,275	24,704	27,855
Groundwater Recharge[2]	16,900	16,420	16,420	16,420	16,420
Total	33,178	37,290	39,965	41,124	44,275
NOTES: (1) Minimum discharge required by Santa Ana River Obligation is 16,850 AFY at Prado. For planning purposes, assume 17,000 AFY; (2) From IEUA 2021 Wastewater and Recycled Water Demand Forecasts					

As a wholesaler, IEUA supplies untreated imported water that is purchased from MWD and supplied to its retail agencies. In fiscal year 2019-2020, 66,438 AF of untreated imported water was supplied to its retail agencies.

Cucamonga Valley Water District
CVWD provides treated potable water and wastewater services to the City of Rancho Cucamonga, portions of the cities of Upland, Ontario and Fontana, and some unincorporated areas of San Bernardino County. It serves an area with a current population of approximately 198,979 with approximately 48,293 water connections to meet an average demand of 48,276 AFY.

Fontana Water Company
FWC serves most of the City of Fontana, portions of the cities of Rialto and Rancho Cucamonga, and unincorporated areas of San Bernardino County. FWC serves a population of more than 237,000 within its 52-square miles service area. FWC has the following existing water supplies:

- Surface water diverted from Lytle Creek, treated at the Summit Plant
- Untreated SWP surface water purchased from IEUA and San Bernardino Valley Municipal Water District (SBVMWD), treated at the Summit Plant
- Recycled water purchased from IEUA
- Groundwater pumped from FWC-owned and operated wells from the underlying Chino Basin, Rialto-Colton/No Man's Land Basins, and Lytle Basin

In 2020, FWC had 48,202 municipal connections, with a volume of water supplied at 39,782 AF.

Monte Vista Water District
MVWD provides retail water service to an area with a 2020 population of 57,787. MVWD also has a wholesale service, of which the service population was 82,409 in 2020. The MVWD's service area covers approximately 9.56 square miles encompassing the City of Montclair and a portion of the City of Chino, as well as unincorporated areas of San Bernardino County. The MVWD receives wholesale water supplies from IEUA and Water Facilities Authority (WFA). It serves the communities of Montclair, Chino Hills, portions of Chino, as well as the unincorporated areas lying between the cities of Pomona, Chino Hills, Chino and Ontario. In 2020, MVWD had 11,856 municipal connections, with a volume of water supplied at 10,366 AF.

City of Chino Hills Water Department
The City of Chino Hills Water Department has multiple sources of water supply: groundwater, MVWD, WFA, Chino Desalter Authority (CDA), and IEUA. These five sources provide the City of Chino Hills with over 41 million gallons per day (MGD) capacity. The city's service area is largely coextensive with the its boundaries, and provides water service to an area with a current population of 82,409 persons. In 2020, Chino Hills had 21,743 municipal connections, with a volume of water supplied at 13,949 AF.

City of Chino Utilities Department
The City of Chino is a retail water supplier that serves customers in the City of Chino and a small portion of the City of Ontario, as well as unincorporated areas of San Bernardino County, and portions of a California State correctional facility located within the city's municipal boundaries. The city's service area covers approximately 28.3 square miles, and provides water service to an area with a current population of 80,808 persons. The city is a sub-agency of IEUA, which is a wholesale water agency, and is also a member of the CDA and the WFA, which are also wholesale water agencies. The demand within the city's service area is met primarily from groundwater produced from city-owned wells in the Chino Basin and from CDA. The city also purchases imported surface water from MWD through IEUA which is treated by WFA. Recycled water is also provided by IEUA. In 2020, Chino had 21,126 municipal connections, with a volume of water supplied at 20,101 AF.

City of Ontario Municipal Utilities Company
The City of Ontario's service area covers approximately 49 square miles, encompassing most of the city, and provides water service to an area with a current population of 178,409. The city is a member agency of various wholesale agencies including the CDA, IEUA, and WFA. Commercial and industrial use accounts for approximately 7,508 acres. Additionally, agricultural use comprises of 6,740 acres. The city's water supply sources include: groundwater pumped from the Chino Basin; treated groundwater from the Chino Basin produced by the Chino Basin Desalter Authority; treated, imported water purchased from MWD through WFA; groundwater and/or surface water purchased from San Antonio Water Company; and recycled water purchased from IEUA. The city's main source of water supply is groundwater pumped from the Chino Basin. In 2020, Ontario had 36,514 municipal connections, with a volume of water supplied at 39,921 AF.

City of Upland Water Department
The City of Upland serves potable water to a population of 78,383 people through 19,487 connections. The city's current water supply portfolio consists of several sources: imported water from MWD purchased through IEUA for treatment at WFA (the city is a member agency); groundwater pumped from city-owned wells and West End Consolidated Water Company (WECWC) (the city is shareholder); groundwater purchased from San Antonio Water Company (SAWCo) (the city is shareholder); surface water purchased from SAWCo (City is shareholder) and treated by the city; and recycled water purchased from IEUA. In 2020, Upland supplied customers a volume of water at 19,134 AF.

City of Pomona
The City of Pomona provides water service to an area with a current population of 153,988, and the city's water service area encompasses an area of approximately 22.9 square miles. The city's total water demands (including potable and recycled water) over the past 10 years have ranged from 19,782 AFY to 24,801 AFY, with an average of 21,957 AFY. The 2020 demand was 21,174 AF. The City's water supply sources include: groundwater pumped from the Chino Basin, Spadra Basin, and Six Basins; treated, imported surface water purchased from MWD through Three

Valleys Municipal Water District; local surface water from San Antonio Creek; and recycled water purchased from the Los Angeles County Sanitation Districts. In 2020, Pomona had 30,041 municipal connections, with a volume of water supplied at 21,174 AF.

Jurupa Community Services District
The Jurupa Community Services District (JCSD) service area covers 40.8 square miles of northwest Riverside County and includes all of the City of Eastvale, approximately 65 percent of the City of Jurupa Valley, and small portions of the City of Norco and unincorporated Riverside County. The service area population in 2020 population was 130,546 persons. In 2020, JCSD had 33,146 municipal connections, with a volume of water supplied at 28,505 AF. JCSD primarily relies on groundwater pumped from the Chino Basin; however, they also obtain water from the Chino Desalter Authority and may obtain water from WMWD in the future.

West Valley Water District
WVWD served a population of 80,161 persons in 2015. WVWD utilizes water from five groundwater basins and treats surface water from Lytle Creek and SWP water at its 14.4-MGD Oliver P. Roemer Water Filtration Facility to serve over 20,000 water service connections. Water demands were approximately 17,131 AFY in 2015 with a projected demand of 27,312 AF by 2040.

Water Facilities Authority
The Water Facilities Authority (WFA) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, MVWD, Ontario, and Upland. Its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The Authority owns and operates a surface water treatment plant called Agua de Lejos Treatment Plant, which began operations in 1988 and is located in the City of Upland. This treatment plant treats and disinfects imported water supplies, primarily State project water, purchased to supplement local groundwater supplies. The treatment plant, located on 16 acres in northern Upland, has the capacity to treat and disinfect 81 MGD. However, recent historical flows through the treatment plant are normally 40 to 50 MGD during the peak summer months and can be as low as 9 to 12 MGD. Agua de Lejos Treatment Plant receives imported surface water supplies from the SWP from MWD through IEUA. Through its members, the Authority indirectly serves more than 450,000 people in the west-end of San Bernardino County.[2]

There are other private and mutual water companies in the Chino Basin, such as San Antonio Water Company, that also supply drinking water to residents within the Chino Basin.

4.20.2.2 Wastewater

As a regional wastewater treatment agency, IEUA provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and the City of Rancho Cucamonga (via the Cucamonga Valley Water District). The contracting cities and water districts are responsible for wastewater collection within their individual service areas. A system of regional trunk and interceptor sewers that convey sewage to regional wastewater treatment plants is owned and operated by IEUA. IEUA's wastewater collection system is divided into two major service areas: the Northern Service Area and the Southern Service Area.

[2] Water Facilities Authority: http://www.wfajpa.org/

IEUA receives approximately 50 MGD of wastewater annually at four wastewater treatment and water recycling plants: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5) and Carbon Canyon Water Recycling Facility (CCWRF). Regional Water Recycling Plant No. 2 (RP-2) no longer operates its liquid treatment sections as of 2002, and only treats solid waste. Recycled water from the plants is treated to Title 22 California Code of Regulations, overseen by the State Water Resources Control Board's Division of Drinking Water (DDW), and distributed throughout the service area.

In addition to IEUA, there are several other wastewater treatment providers in Chino Basin. For instance, the Water Facilities Authority (Authority) is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, MVWD, Ontario, and Upland; its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The City of Riverside, Inland Empire Brine Line owned by the Orange County Sanitation District, and the Western Riverside County Regional Wastewater Authority (WRCRWA) each treat a portion of the wastewater generated within the JCSD. Finally, the Sanitation Districts of Los Angeles County operates a treatment plant that collects wastewater from the City of Pomona. The respective operational treatment plants are described below.

Wastewater Treatment Plants and Systems

RP-1 is located at 2662 East Walnut Street in the City of Ontario and has been in operation since 1948. The plant has undergone several expansions to increase the design hydraulic domestic sewage (wastewater) treatment capacity to 44 MGD. The plant serves areas of Chino, Fontana, Montclair, Ontario, Rancho Cucamonga, and Upland, and treats solids removed from RP-4, located in Rancho Cucamonga. The plant treats an average influent wastewater flow of approximately 28 MGD. RP-1 includes both liquid and solid treatment processes.

RP-2 is located at 16400 El Prado Road in Chino and has been in operation since 1960. The plant operated both liquids and solids treatment sections until 2002, when RP-5 was constructed to handle the liquids treatment section portion of RP-2. Accordingly, solids are now removed from CCWRF and RP-5 and treated at RP-2. The solids treatment section begins with thickening the solids removed from the RP-5 and CCWRF primary and secondary clarification processes. After dewatering, the biosolids are hauled to the Inland Empire Regional Composting Facility (IERCF) in the City of Rancho Cucamonga for further treatment to produce Class A compost.

RP-4 is located at 12811 6th Street in the City of Rancho Cucamonga and has been in operation since 1997. The plant has undergone an expansion to increase the design hydraulic domestic wastewater treatment capacity to 14 MGD. The plant serves areas of Fontana, Rancho Cucamonga, and unincorporated San Bernardino County. The plant treats the liquid portion of an average influent wastewater flow of approximately 10 MGD.

RP-5 is located at 6063 Kimball Avenue, Building C in the City of Chino and has been in operation since 2004. The design hydraulic domestic wastewater treatment capacity is 16.3 MGD, which includes 1.3 MGD of solids processing returned from RP-2. The plant serves areas of Chino, Chino Hills, and Ontario. The plant treats the liquid portion of an average influent wastewater flow, including RP-2 returned flow, of approximately 9 MGD.

CCWRF is located at 14950 Telephone Avenue in the City of Chino and has been in operation since 1992. The design hydraulic domestic wastewater treatment capacity is 11.4 MGD. The plant

serves areas of Chino, Chino Hills, Montclair, and Upland. The plant treats the liquid portion of an average influent wastewater flow of approximately 7 MGD.

Chino I Desalter plant is located at 6905 Kimball Avenue in the City of Chino and commenced operation in 2001. The plant was expanded in 2005 from an 8.4 MGD facility to a 14 MGD facility. Groundwater is pumped from supply wells throughout the Chino Basin area to the Chino I Desalter. The treatment processes include reverse osmosis and ion-exchange for removal of nitrate and total dissolved solids. Approximately 2 MGD of brine, a byproduct of the reverse osmosis and ion exchange processes is transported by the Santa Ana River Inceptor (SARI line) to Orange County and is subsequently discharged to the ocean. The high-quality water is then pumped into the municipal water supply systems for the cities of Chino and Chino Hills, and into the JCSD water system.

Chino II Desalter plant is located at 11202 Harrell Street in Mira Loma and was initiated by the CDA to provide water deliveries to the cities of Norco and Ontario, JCSD, and Santa Ana River Water Company. The treatment processes include reverse osmosis and ion-exchange. The Chino II Desalter became operational in 2006 and was expanded in 2010. It produced an average of 10.6 MGD of drinking water in 2012 and a little more than 1 MGD of brine that is transported by the SARI line to Orange County and subsequently discharged to the ocean.

WFA Agua de Lejos Treatment Plant is located at 1775 N Benson Avenue in the City of Upland, CA 91784. The WFA is a Joint Powers Authority governed by its member agencies: Chino, Chino Hills, MVWD, Ontario, and Upland. Its service area covers approximately 135 square miles within the upper Santa Ana River watershed. The Authority owns and operates a surface water treatment plant called Agua de Lejos Treatment Plant, which began operations in 1988 and is located in the City of Upland. This treatment plant treats and disinfects imported water supplies, primarily State Water Project water, purchased from MWD to supplement local groundwater supplies. Through its members, the Authority indirectly serves more than 450,000 people in the west-end of San Bernardino County. Agua de Lejos Treatment Plant receives imported surface water supplies from the SWP from MWD through IEUA. The treatment plant, located on 16 acres in the northern portion of Upland, has the capacity to treat and disinfect 81 MGD. However, recent historical flows through the treatment plant is normally 40 to 50 MGD during the peak summer months and can be as low as 9 to 12 MGD during the slower winter months.[3]

Riverside Water Quality Control Plant (RWQCP) is located at 5950 Acorn Street Riverside, CA 92504. The RWQCP is being expanded; however, it currently consists of two separate treatment plants and one common tertiary filtration plant. These provide preliminary, primary, secondary, and tertiary treatment for a rated capacity of 40 MGD.[4] The JCSD discharges wastewater to three different treatment plants from three independent sewer systems.[5]

WRCRWA has the capacity to treat 14 MGD of wastewater.[6] The Eastvale area (within the JCSD) discharges to the River Road Lift Station, which pumps the wastewater to another regional treatment plant, operated by a joint powers authority known as the WRCRWA. The JCSD proactively operates and maintains its sewer system to convey the wastewater to the treatment plants in a reliable and cost-effective manner in accordance with the recently adopted Sewer Management Plan.

[3] http://www.wfajpa.org/#Facilities
[4] https://www.riversideca.gov/publicworks/sewer/wqcp.asp
[5] https://www.jcsd.us/customers/sewer-wastewater
[6] https://www.wrcrwa.org/152/Treatment-Plant-Overview

Pomona Water Reclamation Plant is located at 295 Humane Way in the City of Pomona and is managed by the Sanitation Districts of Los Angeles County. The plant occupies 14 acres northeast of the intersection of State Route (SR)-60 and SR-57. The Pomona Water Reclamation Plant (WRP) provides primary, secondary, and tertiary treatment for 15 MGD of wastewater. The plant serves a population of approximately 130,000 people. Approximately 8 MGD of the recycled water is used at over 190 different sites. Reuse applications include landscape irrigation of parks, schools, golf courses, greenbelts, etc.; irrigation and dust control at the Spadra Landfill; and industrial use by local manufacturers. The remainder of the recycled water is discharged into the San Jose Creek, where it is allowed to percolate into the groundwater in the unlined portions of the San Gabriel River before flowing into the ocean.

Brine Disposal Agencies

Non-Reclaimable Wastewater System (NRWS) is operated by IEUA. It is infrastructure for disposal of high-salinity wastewater (brine) and other non-reclaimable high-strength wastewater. The NRWS is comprised of three pipelines shown on Figure 3: the NRWS pipeline, the Etiwanda Wastewater Line (EWL), and the Inland Empire Brine Line (IEBL). The NRWS is split into two service areas within IEUA's jurisdiction. The North NRWS is comprised of the NRWS pipeline and EWL, while the South NRWS is comprised of the IEBL. The NRWS pipeline and the EWL ultimately convey flow to the Sanitation Districts of Los Angeles County (LACSD) through the Joint Outfall System (JOS). The IEBL directly conveys flow to the Orange County Sanitation District (OCSD) by gravity.

4.20.2.3 Stormwater

Each of the cities within the Chino Basin maintain storm water drainage infrastructure within their respective city limits. The County of San Bernardino and County Riverside each manage the storm drain system within their respective unincorporated areas of the Chino Basin and the regional stormwater runoff conveyance infrastructure.

Flood Control Agencies and IEUA Partners

San Bernardino County Flood Control District
The San Bernardino County Flood Control District (SBCFCD) is partnering with IEUA, Chino Basin Watermaster (CBWM), and Chino Basin Water Conservation District (CBWCD) in implementation of the Chino Basin Groundwater Recharge Master Plan. The implementation is known as Chino Basin Facilities Improvement Program (CBFIP). The CBFIP includes modifications to several SBCFCD basins and flood control channels including the installation of five rubber dams and three drop inlet diversion structures to divert imported, storm, and recycled water to 16 groundwater recharge sites.

The following District Comprehensive Storm Drain Plans (CSDP) and Master Plans of Drainage (MPD) apply to the project area: CSDP 1: Rancho Cucamonga MPD, Chino Airport Master Storm Drain Plan (MSDP), Chino Hills MPD, Chino Hills Area MPD, and W. Cucamonga MPD, CSDP 2: Upland MPD, Ontario MPD, Montclair MPD, Fontana MPD, and Chino MPD.

4.20.2.4 Solid Waste

The California Department of Resources Recycling and Recovery (CalRecycle) maintains a Solid Waste Information System (SWIS) that lists disposal sites in San Bernardino County by disposal

facility activity, regulatory status, and operational status. According to SWIS, there are two active Class III landfills[7] within a 20-mile radius of the Chino Basin that conduct solid waste disposal activities and accept construction and demolition material. These landfills are the El Sobrante and Mid-Valley Sanitary Landfills. **Table 4.20-2** lists the closure dates, daily permitted capacities, and remaining permitted capacities of the local Class III solid waste landfills.

Waste Management of Inland Empire is the local division of Waste Management, Inc. that provides collection, disposal, recycling, and environmental services to the Inland Empire. It serves over 220,000 residents and disposes over 17,000 tons of waste weekly in the Inland Empire. It operates the El Sobrante Landfill in Corona, which processes about 43 percent of San Bernardino County's annual solid waste and can currently receive up to 16,054 tons of waste per day. The County of San Bernardino operates the Mid-Valley Sanitary Landfill in Rialto.

In addition to Waste Management Inc., Burrtec Waste Management Services provides solid waste disposal sites and other services such as: trash and recycling facilities; retail waste disposal containers; construction waste facilities including portable restrooms for wastewater; and other private facilities for customized services. Burrtec facilities in proximity to the Chino Basin may be utilized during project construction and operation in addition to the Mid-Valley and El Sobrante landfills; these include: the Agua Mansa Materials Recovery Facility (MRF)/Transfer Station; the West Valley MRF/Transfer Station and the East Valley Transfer Recycling Facility, all located within 10 miles of the Chino Basin area.

Table 4.21-2
LANDFILLS IN PROXIMITY TO THE CHINO BASIN

Facility Name	Address	Closure Date	Daily Permitted Capacity (tons/day)	Remaining Permitted Capacity (cubic yards)
Mid-Valley Sanitary Landfill	2390 Alder Ave, Rialto, CA 92377	4/1/2045	7,500	61,219,377 as of 06/2019
El Sobrante Landfill	10910 Dawson Canyon Rd, Corona, CA 92883	1/1/2051	16,054	143,977,170 as of 4/2018
SOURCE: California Department of Resources Recycling and Recovery, *Solid Waste Information System (SWIS)*, 2021 https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402 https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1880?siteID=2662				

4.20.2.5 Electricity and Natural Gas

The most recent data for California's estimated total energy consumption is from 2018, released by the United States (U.S.) Energy Information Administration's (EIA) California State Profile and Energy Estimates, which indicates that:

- Approximately 7,900 trillion British Thermal Unit (BTU) of energy was consumed;
- Approximately 3,444 trillion BTU of petroleum;
- Approximately 2,210 trillion BTU of natural gas; and
- Approximately 33.3 trillion BTU of coal.

The California Energy Commission's (CEC) Transportation Energy Demand Forecast 2018-2030 was released in order to support the 2017 Integrated Energy Policy Report. The Transportation Energy Demand Forecast 2018-2030 lays out graphs and data supporting its projections of

[7] Class III landfills are only permitted to accept nonhazardous solid waste.

California's future transportation energy demand. The projected inputs consider expected variable changes in fuel prices, income, population, and other variables. Predictions regarding fuel demand included:

- Gasoline demand in the transportation sector is expected to decline from approximately 15.8 billion gallons in 2017 to between 12.3 billion and 12.7 billion gallons in 2030
- Diesel demand in the transportation sector is expected to rise, increasing from approximately 3.7 billion diesel gallons in 2015 to approximately 4.7 billion in 2030
    - Data from the Department of Energy states that approximately 3.9 billion gallons of diesel fuel were consumed in 2017

The most recent data provided by the EIA for energy use in California by demand sector is from 2018 and is reported as follows:

- Approximately 39.1% of energy demand derives from the transportation sector;
- Approximately 23.5% of energy demand derives from the industrial sector;
- Approximately 18.3% of energy demand derives from the residential sector; and
- Approximately 19.2% of energy demand derives from the commercial sector.

In 2020, total system electric generation for California was 277,704 gigawatt hours (GWh). California's massive electricity in-state generation system generated approximately 200,475 GWh which accounted for approximately 72.2% of the electricity it uses; the rest was imported from the Pacific Northwest (8.6%) and the U.S. Southwest (19.2%). Natural gas is the main source for electricity generation at 34.23% of the total in-state electric generation system power as shown in **Table 4.20-3**. Renewables account for 31.7% of the total electrical system power in California.

Table 4.20-3
TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2020)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total California Energy Mix (GWh)	Total California Power Mix
Coal	248	0.12%	219	7,765	8,233	2.96%
Natural Gas	86,136	42.97%	62	8,859	95,057	34.23%
Oil	36	0.02%	0	0	36	0.01%
Other	411	0.20%	0	11	422	0.15%
Nuclear	16,163	8.06%	39	8,743	24,945	8.98%
Large Hydro	33,145	16.53%	6,387	1,071	40,603	14.62%
Unspecified	0	0.00%	6,609	13,767	20,376	7.34%
Non-Renewables and Unspecified Totals	136,139	67.91%	13,315	40,218	189,672	68.30%
Biomass	5,851	2.92%	903	33	6,787	2.44%
Geothermal	10,943	5.46%	99	2,218	13,260	4.77%
Small Hydro	5,349	2.67%	292	4	5,646	2.03%
Solar	28,513	14.22%	282	5,295	34,090	12.28%
Wind	13,680	6.82%	9,038	5,531	28,249	10.17%
Renewables Totals	64,336	32.09%	10,615	13,081	88,032	31.70%
Total	200,475	100.00%	23,930	53,299	277,704	100.00%

Source: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html

An updated summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts," which is excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2018.
- California's total energy consumption is second highest in the nation, but, in 2018, the State's per capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs.
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.
- In 2018, large- and small-scale solar photovoltaic (PV) and solar thermal installations provided 19% of California's net electricity generation.

As indicated above, California is one of the nation's leading energy-producing states, and California's per capita energy use is among the nation's most efficient.

SCE is the primary provider of electricity to the Chino Basin area, except within a select area of the southeastern proximity of the City of Rancho Cucamonga, where the Rancho Cucamonga Municipal Utility is the electricity provider. Natural gas services in the Chino Basin are provided by the Southern California Gas Company.

4.20.2.6 Telecommunication

The Chino Basin area is served by several telecommunication providers including Verizon, California Telecom, AT&T, Frontier, Spectrum, and others.

4.20.3 Regulatory Setting: Utilities & Service Systems

4.20.3.1 Water, Wastewater and Stormwater

Federal

Clean Water Act

The Federal Water Pollution Control Act or Clean Water Act (CWA) serves to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA was created in 1972, and then amended in 1977, and again in 1987 when the National Pollutant Discharge Elimination System (NPDES) program was created. NPDES requires a permit for discharge of pollutants from industrial sources and publicly owned treatment works into navigable waters. The discharge must meet applicable requirements, which are outlined in the CWA and which reflect the need to meet State effluent limitations and State water quality standards.

Section 303 (d) of the CWA states that each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301 (b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. The State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such water (see Subchapter 4.11, *Hydrology and Water Quality*, of this EIR).

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) is the federal law that protects drinking water supplies and applies to every public water system in the United States. The law requires many actions to protect drinking water including source water protection, treatment, distribution system integrity, and public information. Source water may include rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA authorizes the U.S. EPA to set national health-based standards for drinking water to protect against both naturally-occurring and human-made contaminants that may be found in drinking water. The National Primary Drinking Water Regulations set enforceable maximum contaminant levels (MCLs) for particular contaminants in drinking water or required ways to treat water to remove contaminants. Each standard also includes requirements for water systems to test for contaminants in the water to make sure standards are achieved.

National Pollutant Discharge Elimination System (NPDES) Program

As stated above, the NPDES permit program is administered in the State of California by the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) under the authority of the USEPA to control water pollution by regulating point sources that discharge pollutants into Waters of the US. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The proposed program would be covered under the general permits discussed below.

General Dewatering Permit

The SWRCB has issued General Waste Discharge Requirements (WDRs) under Order No. R8-2003-0061, NPDES No. CAG 998001 (Dewatering General Permit) governing non-stormwater construction-related discharges from activities such as dewatering, water line testing, and sprinkler system testing. The discharge requirements include provisions mandating notification, testing, and reporting of dewatering and testing-related discharges. The General WDRs authorize such construction-related discharges so long as all conditions of the permit are fulfilled. This permit would apply to the proposed program for the testing of the effluent pipelines and in the event that shallow perched groundwater is encountered during construction that requires dewatering.

Construction General Permit

The Construction General Permit NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009-DWQ, NPDES No. CAS000002, Construction General Permit) regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects (LUP), including installation of water pipelines and other utility lines.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving offsite into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring

program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

Industrial General Permit

The Industrial General Permit (IGP) became effective July 1, 2015 (Order No. 2014-0057-DWQ). The IGP covers ten broad categories of industrial activities, including sewage or wastewater treatment works that store, treat, recycle, and reclaim municipal or domestic sewage with a design flow of one million gallons per day or more, or are required to have an approved pretreatment program under 40 Code of Federal Regulations Part 403. For a sewage treatment facility, the IGP covers both the municipal or domestic sewage being sent to the facility for treatment, and rainwater falling on the facility that must be managed as stormwater. This is because rainwater falling on the facility is routed to the onsite treatment system to prevent contaminants from migrating offsite from the treatment facility.

Municipal Stormwater Permitting (MS4)

The State's Municipal Stormwater Permitting Program regulates stormwater discharges from Municipal Separate Storm Sewer Systems (MS4s). MS4 Permits were issued in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES stormwater permits for medium (serving between 100,000 and 250,000 people) and large (serving more than 250,000 people) municipalities. As part of the Phase II, the SWRCB adopted a General Permit for small MS4s (serving less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and hospital complexes. The permit also requires permittees to develop Comprehensive Bacteria Reduction Plans (CBRP).

State

State Water Resources Control Board Division of Drinking Water

The U.S. EPA has granted the State of California the authority to implement SDWA within its jurisdiction. The SWRCB *Division of Drinking Water* regulates public drinking water systems and is responsible for making sure water systems test for contaminants, reviewing plans for water system improvements, conducting on-site inspections and sanitary surveys, providing training and technical assistance, and taking action against water systems not meeting standards.

The SWRCB's *Safe Drinking Water Plan* provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The plan, which is updated every five years, represents the SWRCB's assessment of the overall quality of the State's drinking water, the identification of specific water quality problems, an analysis of the known and potential health risks that may be associated with drinking water contamination in California, and recommendations to improve drinking water quality. The plan also identifies and evaluates existing and proposed statewide water demand management and water supply augmentation programs and projects to address the State's water needs. The plan provides resource management strategies and recommendations to strengthen integrated regional water management. These strategies can reduce water demand, improve operational efficiency, increase water supply, improve water quality, practice resource stewardship, and improve flood management.

Protection of Underground Infrastructure

The California Government Code Sections 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations.

Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for Southern California.

Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Health and Safety Code

California Health and Safety Code Section 116815 requires all pipes carrying recycled water to be colored purple or wrapped in purple tape. This requirement stems from a concern in cross-contamination and potential public health risks similar to those discussed for Title 17, Sections 7583-7586 and 7601-7605 of the California Code of Regulations. It is also discussed in the California Health Laws Related to Recycled Water.

Regional Water Quality Control Board (RWQCB)

The primary responsibility for the protection of water quality in California rests with the SWRCB and the nine RWQCBs. The SWRCB sets statewide policy for the implementation of State and Federal laws and regulations. The RWQCBs adopt and implement Water Quality Control Plans (Basin Plans) which recognize regional differences in natural water quality, actual and potential beneficial uses, and water quality problems associated with human activities. The program area is within the jurisdiction of the Santa Ana Region.

California Department of Water Resources (DWR)

The California DWR is a department within the California Resources Agency. The DWR is responsible for the State's management and regulation of water usage.

Senate Bills 610 (Chapter 643, Statutes of 2001) and 221 (Chapter 642, Statutes of 2001)

Senate Bill 610 and Senate Bill 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. They require that water supply assessments occur early in the land use planning process for all large-scale development projects. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. They also require an identification of existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in five-year increments for a 20-year projection.

Local

The Chino Basin area encompasses multiple jurisdictions, including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities and the county has its own General Plan and municipal code that identify goals and policies regarding utilities.

San Bernardino County Flood Control District (SBCFCD)

Any encroachments on the SBCFD's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the SBCFCD prior to start of construction.

4.20.3.2 Solid Waste

Federal

Resource Conservation and Recovery Act
The Resource Conservation and Recovery Act (RCRA) (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. EPA has delegated the enforcement responsibility to the State of California.

Title 40 of the Code of Federal Regulations Part 503
The federal biosolids regulations are contained in Title 40 of the Code of Federal Regulations Part 503 (40 CFR Part 503) as Standards for the Use or Disposal of Sewage Sludge. Known as the Part 503 Rule, or Part 503, these regulations govern the use and disposal of biosolids. Part 503 established requirements for the final use or disposal of biosolids when biosolids are:

- Applied to land to condition the soil or fertilize crops or other vegetation;
- Placed on a surface disposal site for final disposal; or
- Fired in a biosolids incinerator

Part 503 permits are issued by the U.S. EPA and are required for all biosolids generators. Part 503 requirements can be incorporated into the NPDES permits that also are issued to publicly-owned treatment works.

State

California Code of Regulations (CCR)
Pursuant to CCR Title 23, Division 3, Article 2 (Waste Classification and Management), and Article 3 (Waste Unit Classification and Siting), Class III (municipal solid waste) landfills are sited in accordance with criteria that are similar to those found in Subtitle D of RCRA. CCR Title 27 includes various regulations pertaining to siting, design, construction, and operation of solid waste landfills.

CCR Title 22, Division 4, Sections 60301 through 60355 (Articles 1 through 9), include descriptions of overall allowable sources of and uses for recycled water, as well as specific use descriptions depending on treatments. Title 22 also includes specific treatment pathways including disinfection procedures, oxidation, soils, and bed filter media, and requirements for impoundments. It covers use area requirements, water testing and analysis, and plant design and operational requirements.

California Department of Resources Recycling and Recovery (CalRecycle) Formerly California Integrated Waste Management Board (CIWMB)
CalRecycle is the State agency designated to oversee, manage, and track California's 76 million tons of waste generated each year. It is one of the six agencies under the umbrella of the California Environmental Protection Agency. CalRecycle develops laws and regulations to control and manage waste, for which enforcement authority is typically delegated to the local government. CalRecycle works jointly with local governments to implement regulations and fund programs.

The Integrated Waste Management Act of 1989 (Public Resources Code [PRC] Section 40050 et seq. or Assembly Bill [AB] 939, codified in PRC Section 40000), administered by CalRecycle,

requires all local and county governments to adopt a Source Reduction and Recycling Element to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by the year 1995 and 50 percent by the year 2000. To assist local jurisdictions in achieving these targets, the California Solid Waste Reuse and Recycling Access Act of 1991 requires all new developments to include adequate, accessible, and convenient areas for collecting and loading recyclable and green waste materials.

California Integrated Waste Management Act of 1989 (AB 939)
The California Integrated Waste Management Act of 1989 (AB 939) redefined solid waste management in terms of both objectives and planning responsibilities for local jurisdictions and the State. The act was adopted in an effort to reduce the volume and toxicity of solid waste that is landfilled and incinerated by requiring local governments to prepare and implement plans to improve the management of waste resources. AB 939 required each of the cities and unincorporated portions of the counties to divert a minimum of 25 percent of the solid waste landfilled by 1995 and 50 percent by the year 2000. To attain goals for reductions in disposal, AB 939 established a planning hierarchy utilizing new integrated solid waste management practices. These practices include source reduction, recycling and composting, and environmentally safe landfill disposal and transformation.

California Solid Waste Reuse and Recycling Act of 1991 (AB 1327)
Other State statutes pertaining to solid waste include compliance with the California Solid Waste Reuse and Recycling Act of 1991 (AB 1327), which requires the local jurisdiction to require adequate areas for collecting and loading recyclable materials within a development project for commercial, institutional, marina, and residential buildings with 5 units or more.

Local

The IEUA service area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities and the county has its own General Plan and municipal code that identify goals and policies regarding utilities.

San Bernardino County Construction and Demolition Solid Waste Management Plan
San Bernardino County requires the preparation of construction and demolition solid waste management plans (waste management plans) for all new construction projects. The waste management plan's goal is to ensure a minimum of 50 percent diversion of construction building materials and demolition debris from landfills and compliance with State law which states that 50 percent of non-hazardous construction and demolition debris be recycled and/or salvaged for reuse in order to extend the life of landfills. Information provided in the waste management plan includes how the waste will be managed, hauler identification, and anticipated material wastes.

4.20.3.3 Electricity and Natural Gas

State

California Energy Action Plan II
The California Energy Action Plan II is the State's principal energy planning and policy document (California Energy Commission, 2005, 2008). The plan identifies statewide energy goals, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address

California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy and capacity needs, clean and efficient fossil-fired generation is supported.

In 2002, California established its Renewable Portfolio Standard program,[8] with the goal of increasing the percentage of renewable energy in the State's electricity mix to 20 percent by 2017. The California Energy Commission subsequently accelerated that goal to 2010, and further recommended increasing the target to 33 percent by 2020. Because much of electricity demand growth is expected to be met by increases in natural-gas-fired generation, reducing consumption of electricity and diversifying electricity generation resources are significant elements of plans to reduce natural gas demand.

California's Green Building Standards Code (CALGreen)

Effective January 1, 2011, California's Green Building Standards Code (CALGreen) requires the diversion of at least 50 percent of the construction waste generated during most "new construction" projects (CALGreen Sections 4.408 and 5.408). Subsequent amendments have expanded upon what types of construction are covered. In all jurisdictions, including those without a Construction and Debris (C&D) ordinance requiring the diversion of 50 percent of construction waste, the owners/builder of construction projects within the occupancies subject to this requirement must divert 50 percent of the construction waste materials generated during the project. The 50 percent C&D diversion rate can be met through three methods: 1) develop and submit a waste management plan to the jurisdiction's enforcement agency which identifies materials and facilities to be used and document diversion; 2) use a waste management company, approved by the enforcing agency, that can document 50 percent diversion; or 3) use the disposal reduction alternative, as appropriate for the type of project. If the waste management plan option is used, the plan should be developed before construction begins, and project managers should use the project's planning phase to estimate materials that will be generated and identify diversion strategies for those materials. All covered projects should be able to divert 50 percent non-hazardous waste.

California Assembly Bill 341

In 2012, AB 341 was signed into law in California to help reduce greenhouse gas emissions and set a statewide goal to recycle, compost, or source reduce 75 percent of all solid waste generated in California by 2020. This legislation requires businesses and multi-family residential dwellings of five units or more, that generate four or more cubic yards of commercial solid waste per week, to implement a recycling program.

Resource Conservation and Recovery Act

RCRA (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. EPA has delegated the enforcement responsibility to the State of California.

[8] The Renewable Portfolio Standard is a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. The policy ensures that a minimum amount of renewable energy is included in the portfolio of electricity resources serving a state or country. By increasing the required minimum amount over time, the Renewable Portfolio Standard puts the electricity industry on a path toward increasing sustainability.

Integrated Energy Policy Report
Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the State's economy; and protect public health and safety (PRC § 25301[a]). The California Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 Integrated Energy Policy Report (IEPR) was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast.

California Code Title 24, Part 6, Energy Efficiency Standards
CCR Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and went into effect on January 1, 2020. The 2019 Title 24 standards went into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7% less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53% less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30% less energy due to lighting upgrades.

Local

The Chino Basin area encompasses multiple jurisdictions including unincorporated areas of San Bernardino County and seven incorporated cities. Each of these cities and County has its own General Plan and municipal code that identify goals and policies regarding utilities.

4.20.4 Thresholds of Significance: Utilities & Service Systems

According to Appendix G, Section XIX, of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

4.20.5 Project Impacts: Utilities & Service Systems

a) Would the project or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

4.20.5.1 Water

The CBP includes the construction of the following types of facilities: 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency well; 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size; an AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities; and expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The development of the above facilities constitutes the construction of new and expansion or modifications to existing water infrastructure facilities. The environmental effects associated with the proposed project are documented throughout this DPEIR. As such, given that the proposed CBP is anticipated to result in a significant and unavoidable impact related to GHG from construction of the CBP facilities, the construction of the proposed water facilities associated with the CBP is anticipated to cause a significant impact. Therefore, impacts under this issue are considered significant and unavoidable.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures designed to reduce GHG emissions from construction (and operation) of CBP are identified in Subchapter 4.9, of this DPEIR (MM **GHG-1** specifically applies to construction related emissions). No additional mitigation measures are recommended or required that would reduce significant and unavoidable impacts related to construction of new or expansion or modifications to existing water facilities. However, all mitigation measures identified throughout this DPEIR would otherwise reduce impacts related to the construction of water facilities under all remaining issues set forth in Appendix G of the CEQA Guidelines.*

Level of Significance After Mitigation: Significant and Unavoidable

As stated above under Mitigation Measures, no feasible mitigation measure have been identified that would reduce impacts related to construction of the proposed water facilities as part of the CBP. As such, though MM **GHG-1** would reduce construction related GHG emissions to the greatest extent feasible, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. Thus, the proposed CBP would result in significant and unavoidable impacts related to construction of new or expansion or modifications to existing water facilities.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As discussed throughout this DPEIR, the proposed CBP would not result in any cumulative impacts from developing the proposed water facilities except those identified above in Subchapter 4.9, Greenhouse Gases / Global Climate Change. GHG impacts from both construction and operation of the CBP are mitigated to the greatest extent feasible, but the program will still contribute to global climate change through a cumulatively considerable contribution of greenhouse gases. As such, the proposed project would result in a cumulatively considerable/ significant adverse impact related to construction of new or expansion or modifications to existing water facilities.

Level of Significance After Mitigation: Cumulatively Significant Impact

4.20.5.2 Wastewater Treatment

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed CBP includes construction of various types of wells. Construction workers would temporarily require use of portable sanitary units during construction of the proposed wells. Wastewater generated during construction of the proposed projects would be minimal and would not require the construction of new wastewater treatment facilities. Because construction of new or expanded facilities is not required to accommodate the Project Category 1 facilities, there would be no construction impacts associated with the provision of these facilities to serve the proposed CBP facilities.

During operation, the proposed wells would not require permanent staff, and as such would not require connection to the sewer system. Therefore, the proposed project would not require the expansion or construction of a new wastewater treatment facilities. Because construction of new or expanded facilities is not required to accommodate the CBP projects, there would be no operation impacts associated with the provision of these facilities to serve the CBP projects.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The development of the proposed 8,200 LF of brine conveyance associated with the disposal of brine generated from the water treatment processes would constitute "construction of wastewater treatment facilities," and its construction is not individually anticipated to result in significant impacts. Mitigation has been addressed through this DPEIR to ensure that impacts under each of the 20 topics analyzed are minimized to the greatest extent feasible. This mitigation includes measures that would ensure appropriate site location, minimization of impacts from construction and operational practices, etc. While mitigation can minimize impacts for most of the issues analyzed in this DPEIR, the construction of brine conveyance would contribute to the overall significant impacts identified above under Subchapter 4.9, Greenhouse Gases / Global Climate Change. As such, given that the proposed CBP is anticipated to result in a significant and unavoidable impact related to GHG from construction of the CBP facilities, the construction of the proposed facilities associated with the CBP is anticipated to cause a significant impact.

Project Category 3: Groundwater Storage Increase
This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded wastewater facilities.

Project Category 4: AWPF and Other Water Treatment Facilities
This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The development of the proposed AWPF would constitute "construction of wastewater treatment facilities," and its construction is not individually anticipated to result in significant impacts. Mitigation has been addressed through this DPEIR to ensure that impacts under each of the 20 topics analyzed are minimized to the greatest extent feasible. These mitigation include measures that would ensure appropriate treatment of significant biological and cultural resources, minimization of impacts from construction and operational practices, etc. While mitigation can minimize impacts for most of the issues analyzed in this DPEIR, the development of the AWPF would contribute to the CBP's overall significant construction- and operations-related GHG impacts. As such, a potentially significant impact may occur.

Similarly, new wellhead treatment facilities at or near well sites and at regionally located sites, and improvements to existing groundwater treatment facilities would constitute "construction of wastewater treatment facilities," because these facilities would discharge brine waste that would

result from treating groundwater. It is anticipated that, as stated above under Project Category 2, such facilities would require connection to the Inland Empire Brine Line or other brine line to treat this brine waste to be discharged in some form—for example treated effluent can be discharged to the Pacific Ocean. Impacts thereof would be similar to that which has been described for the AWPF above.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures designed to reduce GHG emissions from construction (and operation) of CBP are identified in Subchapter 4.9, of this DPEIR (MM **GHG-1** specifically applies to construction related emissions). No additional mitigation measures are recommended or required that would reduce significant and unavoidable impacts related to construction of new or expansion or modifications to existing wastewater facilities. However, all mitigation measures identified throughout this DPEIR would otherwise reduce impacts related to the construction of wastewater facilities under all remaining issues included in Appendix G of the CEQA Guidelines.*

Level of Significance After Mitigation: Significant and Unavoidable

As stated above under Mitigation Measures, no feasible mitigation measures have been identified that would reduce to a level of insignificance GHG impacts related to construction of the proposed facilities as part of the CBP. As such, though MM **GHG-1** would reduce construction-related GHG emissions to the greatest extent feasible, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. Thus, the proposed CBP would result in significant and unavoidable GG impacts related to construction of new or expansion or modifications to existing wastewater facilities.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

As discussed throughout this DPEIR, the proposed CBP would not result in any cumulative impacts from developing the proposed wastewater facilities except those identified above under Subchapter 4.9, Greenhouse Gas / Global Climate Change. GHG impacts from both construction and operation of the CBP are mitigated to the greatest extent feasible, but the program will still contribute to global climate change through a cumulatively considerable contribution of greenhouse gases. As such, the proposed project would result in a cumulatively considerable/significant adverse impact related to construction of new or expansion or modifications to existing wastewater facilities.

Level of Significance After Mitigation: Cumulatively Significant Impact

4.20.5.3 Stormwater Drainage

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are

anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Implementation of the proposed wells would be housed aboveground. The proposed wells would be developed within sites that are anticipated to be less than one half acre in size. Well development would result in the addition of impervious surfaces that would increase stormwater runoff quantity. This increase could affect on-site drainage patterns as well as off-site drainage volume and require the construction and operation of new and/or expanded stormwater drainage facilities. As such, mitigation that would require implementation of a drainage plan is provided below to ensure that impacts related to stormwater drainage facilities are minimized below significance thresholds.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Proposed pipelines would be underground and would not permanently alter existing site drainage patterns. The pipelines would not require the construction of new or expanded stormwater drainage facilities. Because there would be no requirement for the construction of new or expanded drainage facilities to serve the proposed project, there would be no construction impacts associated with the provision of these facilities to serve the proposed pipelines.

Development of proposed ancillary facilities would have the same impacts as those identified under Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the relocation or construction of new or expanded stormwater facilities.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.
Impacts are the same as those identified under Project Categories 1 and 2.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-1: ***<u>Implementation of a Drainage Plan to Reduce Downstream Flows</u>. Prior to issuance of permits for construction of project facilities, IEUA shall prepare a drainage plan that includes design features to reduce stormwater peak concentration flows exiting the above ground facility sites (consistent with MS4 requirements) so that the capacities of the existing downstream drainage facilities are not exceeded. These design features could include bio-retention, sand infiltration, return of stormwater for treatment within the treatment plant, and/or detention facilities.***

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure (MM) **UTIL-1** is sufficient to reduce the potential for impacts related to construction of stormwater facilities.

<u>Cumulative Impact Analysis</u>

Level of Significance Before Mitigation: Potentially Significant

Cumulative stormwater and drainage infrastructure development in the region may be significant as the region continues to be developed with uses that require such facilities. The cumulative impact of the stormwater infrastructure required to implement the proposed CBP would not be cumulatively considerable given that mitigation would ensure that the CBP facilities would implement proper drainage to reduce downstream flows. This would minimize the program's demand for extension of such infrastructure to a less than cumulatively considerable level through implementation of mitigation. Thus, the contribution of the CBP to future stormwater infrastructure would not be cumulatively considerable, thus preventing a cumulatively considerable contribution to significant cumulative stormwater infrastructure.

Level of Significance After Mitigation: Less Than Significant

4.20.5.4 Energy and Natural Gas

The proposed CBP includes the development of various types of water infrastructure facilities, outlined above under **Water**. The development of the above facilities would result in the construction of new and expansion of existing energy infrastructure to serve the new CBP facilities; however, as discussed above under Subchapter 4.7, Energy, the proposed CBP would not cause or result in the need for additional energy producing facilities or energy delivery systems, which includes electricity and natural gas. Given that connection to the electrical power grid and connection to natural gas, where a connection to natural gas is required at future facilities, are minor components of the overall construction of CBP facilities and that the energy analysis concluded that impacts thereof would be less than significant, the provision of these facilities as part of the overall CBP would not cause a significant environmental effect.

For any specific CBP facility that would not have access to electrical connection or natural gas, and would require either extension of infrastructure or creation of new infrastructure to meet electricity and/or natural gas needs at an CBP facility site, mitigation will be required to examine the environmental impacts thereof.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-2: For future CBP projects that do not have access to electrical or natural gas connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet electricity and/or natural gas needs at a future CBP facility site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical or natural gas infrastructure.

Level of Significance After Mitigation: Less Than Significant

Because it is not known where future CBP facilities will be installed, there may be locations in which energy and/or natural gas services are not available within the immediate vicinity of a given CBP site. As such, MM **UTIL-2** would ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Cumulative energy and natural gas infrastructure development in the region may be significant as the region continues to be developed with uses that require such connections. The cumulative impact of the connection to electricity and natural gas required to implement the proposed CBP would not be cumulatively considerable given that mitigation would ensure that the program's demand for extension of such infrastructure would be minimized through implementation of mitigation identified for specific projects that undergo subsequent CEQA documentation.

Level of Significance After Mitigation: Less Than Significant

4.20.5.5 Telecommunications

Combined Project Categories

The types of facilities proposed as part of the CBP typically would not require extension of telecommunication services. However, given that the facilities proposed as part the CBP have not been designed, there is a potential for certain facilities (such as facilities proposed that would require full-time personnel on site or otherwise require connection to telecommunication facilities) to require extension of telecommunication infrastructure as part of operation. As such, given that the location of most future CBP facilities is unknown, Mitigation Measure **UTIL-3** would be required to ensure that impacts related to extension of infrastructure are minimized for the proposed CBP projects that would require telecommunication services by requiring project-specific subsequent CEQA documentation for projects proposed at sites without immediate access to telecommunication connections.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-3: ***For future CBP projects that do not have access to telecommunication connections in the immediate vicinity (defined here as a 1,000-foot buffer from a given project site), and will require either extension of infrastructure or creation of new infrastructure to meet telecommunication needs at a future CBP facility site, subsequent CEQA documentation shall be prepared that fully analyzes the impacts that would result from extension or development of electrical or natural gas infrastructure***

Level of Significance After Mitigation: Less Than Significant

Because it is not known where future CBP facilities will be installed, there may be locations in which telecommunication services are not available within the immediate vicinity of a given CBP site. As such, MM **UTIL-3** would ensure that a subsequent CEQA documentation is prepared for projects that require extension or development of such infrastructure, which will ensure that any impacts are appropriately assessed and mitigated.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Cumulative telecommunication infrastructure development in the region may be significant as the region continues to be developed with uses that require such connections. The cumulative impact of the connection to telecommunication required to implement the proposed CBP would be less than significant given that mitigation would ensure that the program's demand for extension of such infrastructure would be minimized to less than cumulatively considerable through implementation of mitigation identified for specific projects that undergo subsequent CEQA documentation. The contribution of the CBP to future telecommunication infrastructure is considered a benefit to the overall Chino Basin as it may enable expanded supply for other uses surrounding future CBP facilities.

b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Introduction: Overall Impacts from CBP Implementation

The CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 AFY of recycled water in the Chino Basin and extract the water during call years, which will likely be in dry seasons. The proposed CBP is uniquely designed to deliver public benefits including a highly reliable, dedicated environmental water supply to benefit Bay Delta instream flows, as well as enhance water supply reliability and improve water quality for water users in southern California.

The CBP would increase additional available groundwater supplies in the adjudicated Chino Groundwater Basin through increased water recycling and storage, and then dedicate a like amount of water for environmental flow purposes, the CBP provides a compelling example of a conjunctive use storage project operating at both ends of the SWP. The reliability of the water designated for groundwater storage is based upon the development of new water supplies from treated wastewater secured from IEUA partner agencies. In the scope of the CBP, new water would be secured, transported, treated, and then deposited in the Chino Basin for ecological

benefit in the Bay-Delta watershed while providing water supply reliability and improved water quality benefits to IEUA customers and partner agencies.

The CBP will provide for an exchange of new water supplies in the Chino Basin for SWP supplies in Lake Oroville in Northern California that would otherwise be delivered to Southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits.

The CBP would produce 15,000 AFY of new water supply for a period of 25 years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in hydrologically drier years when pulse flows in the Feather River would provide the most ecosystem benefit and other SWP operations would not be affected. The exchange would be administered through agreements with the DWR, the California Department of Fish and Wildlife (CDFW), MWD, and other project partners. Additionally, new water stored in the Chino Basin would also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic events that disrupt imported water infrastructure.

The program would rely on water transfer agreements through MWD. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to MWD or use the water locally instead of taking raw imported water from MWD (referred to as “in lieu”). MWD would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction would not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years.

The CBP proposes the implementation of a variety of projects, as outlined in the Project Description, and listed above under question (a), Water. The CBP’s proposed AWPF, new injection and extraction facilities, conveyance facilities, and water system interconnections would allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin and improved storage and recovery operations, as well as redundancies in water delivery infrastructure that would facilitate future rehabilitation and replacement of existing infrastructure.

Growth is one of the drivers shaping water and basin management. As urban land uses replace agricultural and vacant land uses, the water demands within the Chino Basin are expected to increase. Total water demand is projected to grow from about 290,000 AFY in 2015 to about 416,000 AFY by 2040 (refer to **Table 4.20-1**, above), an increase of about 126,000 AFY. The projected growth in water demand through 2040 is driven by urban water demands created by a number of factors related to population growth within the region. The proposed CBP would contribute to addressing anticipated growth through the provision of facilities that would provide an additional source of water that can be used by stakeholders of the Chino Basin, managed by the Chino Basin Watermaster, which would contribute to meeting demand for potable water within the Basin.

The Technical Memorandum: Evaluation of the Chino Basin Program/Water Storage Investment Program prepared by West Yost, provided as Appendix 4 of Volume 2 to this DPEIR, indicates that the proposed CBP would have the following potential impacts to the Chino Basin and the stakeholders of the Chino Basin from implementation of the CBP scenarios (**Table 4.20-4**):

Table 4.20-4
SUMMARY OF POTENTIAL MATERIAL PHYSICAL INJURY (MPI) AND ADVERSE IMPACTS

Potential Impact Category	Projected Impacts of the CBP Scenarios
Net recharge and Safe Yield	Net recharge is projected to decrease in the late call scenarios (Scenarios 1, 3, and 5) by an average of 260 to 410 AFY during the program period. Net recharge is projected to increase in the early call scenarios (Scenarios 2, 4, and 6) by an average of 680 to 840 AFY during the program period.
Pumping sustainability	Under the baseline scenario, 17 wells are projected to experience pumping sustainability challenges. One or more of the CBP scenarios are expected to cause pumping sustainability challenges at two additional wells and exacerbate the existing pumping sustainability challenges at several wells identified under the baseline scenario.
New land subsidence	New land subsidence is projected to be minor and only occur in areas already identified under the baseline scenario.
State of Hydraulic Control	Hydraulic Control is projected to be maintained through 2053.
Direction and speed of known plumes	Plume displacement is projected to be minor and is not projected to impact any previously unimpacted appropriator wells through 2053.
Title 22 Compliance	No compliance challenges with minimum travel times are expected to occur with currently active wells and assumed locations for future wells.

As described above, and within Subchapter 4.11, Hydrology and Water Quality, implementation of the CBP requires mitigation to ensure adequate management of the Chino Basin as the individual CBP facilities are developed. This includes mitigation that addresses pumping sustainability, hydraulic control, and reduction in net recharge, which could, without mitigation, result in variability in available supply to Chino Basin stakeholders.

As such, and as stated above under Subchapter 4.11, Hydrology and Water Quality, question (b), the Watermaster will review IEUA's Storage and Recovery Program application and gathers the appropriate data to (1) determine whether future CBP projects would result in loss of pumping sustainability, result in potential reduction in net recharge and impacts to Safe Yield, and/or result in new subsidence, and (2) respond with appropriate mitigation to minimize the potential adverse hydrological impacts that may occur from a project. Additionally, IEUA will adhere to the plan of response prepared by the Watermaster should the Basin conditions to vary from the projections that have been modeled as part of the CBP (and all supporting documentation). The mitigation provided above under Subchapter 4.11, Hydrology and Water Quality, question (b), would enable the Watermaster to maintain sustainable management of the Basin, and thereby maintain sufficient water supply allocated to the Parties for the foreseeable future.

Based on this information, the project would have a less than significant potential to have sufficient water supplies available to serve the project and reasonably foreseeable future development

during normal, dry and multiple dry years, once mitigation is implemented. Mitigation measures **HYD-1, HYD-2, HYD-3, HYD-4, HYD-5, HYD-6,** and **HYD-7** are required to minimize impacts related to pumping sustainability, net recharge and safe yield, hydraulic control, and overall basin management. With the implementation of mitigation that would ensure sustainable management of the Basin, impacts under this issue would be less than significant.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)

This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the Cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The development of wells would require minimal water usage for dust control activities should grading be required to install the wells. The installation of wells may require up to 60 days of construction to complete. Therefore, given the short period of construction, water demand during construction would not be substantial and would not require new or expanded water supply resources. Furthermore, the development of the proposed wells would not require expanded supply to operate beyond those created by the implementation of CBP Facilities as discussed above. Therefore, impacts would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities

This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction of the proposed pipelines and ancillary facilities would require minimal water usage for dust control and concrete washout activities. Pipeline construction would occur in phases and is expected to be relatively short, lasting from several months to a year. Therefore, water demand during construction would not be substantial and would not require new or expanded water supply resources.

The proposed pipeline and ancillary facilities would distribute water generated by the AWPF and at existing water treatment facilities throughout the Chino Basin. These facilities would not require additional water for operation. Conveyance and distribution of water and brine through the proposed pipelines and ancillary facilities would facilitate the creation of a reliable source of water supply within the Basin, specifically through injecting highly treated water into the Basin for use by stakeholders of the Basin. Therefore, impacts related to new or expanded water supply resources or entitlements would be less than significant beyond those created by the implementation of CBP facilities as discussed above.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity is discussed in the introduction above. The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, impacts related to new or expanded water supply resources or entitlements would be less than significant beyond those created by the implementation of CBP facilities as discussed above.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

Impacts would be the same as those discussed under Project Categories 1, 2, and 3 above.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

*Mitigation Measures: Mitigation measures **HYD-1** through **HYD-7** are required to minimize impacts related to pumping sustainability, net recharge and safe yield, hydraulic control, and overall basin management. These mitigation measures will ensure that sufficient water supplies are available to serve the Parties within the Chino Basin.*

Level of Significance After Mitigation: Less Than Significant

Please refer to the discussion under Mitigation Measures above. Mitigation Measures **HYD-1** through **HYD-7** would create a hierarchy of checks and balances as part of the sustainable management of the Chino Basin through continuous monitoring of known issues within the Basin and a comparable mitigative response to ensure that these issues do not result in a significant impact. No further mitigation is required to ensure that sufficient water supplies are available to serve the stakeholders within the Basin.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Future cumulative development within the Chino Basin is expected to require new or expanded water supply resources or entitlements to serve the increase in urban development. However, the goals of the CBP include meeting permit compliance for the continued use of recycled water within the Chino Basin, as the CBP would ensure that recycled water is available as a source of Basin recharge through minimizing the TDS of recycled water within the Basin. Additionally, the goals of the CBP include developing infrastructure that would address long term supply vulnerabilities, which in addition to improving recycled water availability within the Basin as described above, would enhances local groundwater supplies through the installation of additional extraction wells and through the installation of new wellhead treatment systems that would bring existing out-of-service wells online.

The proposed CBP projects would accommodate increasing water demand and would not contribute to the need for new or expanded water supply resources or entitlements. Because the project would result in a less than significant impact related to expanded water supply resources, the project's contribution to cumulative impacts would not be cumulatively considerable, and therefore, the CBP would not contribute to a significant cumulative water supply impacts.

Level of Significance After Mitigation: Less Than Significant

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Please refer to the discussion under **(a) Wastewater**, above.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

The proposed CBP includes construction of wells. As stated under the response to issue 4.20(a) above, construction workers would temporarily require use of portable sanitary units during construction of the proposed wells and potentially during the installation of the proposed monitoring devices. Wastewater generated during construction of the proposed CBP facilities would be minimal, consisting of portable toilet waste generated by construction workers and therefore would not substantially impact wastewater treatment capacity. All conveyance systems, wells, and ancillary facilities would not generate wastewater during their operation. Therefore, impacts related to available wastewater treatment capacity would be less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5-MG reservoir, and up to 6 turn outs varying between 12 and 72 inches in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts related to implementation of all of the facilities under this Project Category, excepting brine conveyance, are the same as those identified under Project Category 1, above.

The disposal of brine through the proposed brine conveyance facilities are addressed under Project Category 4, below, and would therefore be the same as those identified under Project Category 4, below (less than significant with the implementation of mitigation identified below).

Project Category 3: Groundwater Storage Increase
This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to require or result in the impacts related to wastewater treatment capacities.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

The proposed AWPF at RP-4 would constitute another form of treatment to IEUA and other agency recycled water. As with the AWPF, wellhead treatment facilities would create a new sources of brine waste generated by water treatment that would require treatment by the applicable wastewater treatment provider. Brine from the AWPF at RP-4 would be conveyed through a 1,400-foot 8-inch HDPE brine line using residual pressure from the RO system. The new brine line would exit the southeast side of the AWPF and connect to existing manhole EINL-008 on the NRWS pipeline, located on Etiwanda Avenue between Wells Street and 6th Street. No trenchless crossings would be required for this brine line. It has been verified that the existing NRWS infrastructure would be able to accommodate the brine stream at the point of connection and downstream, and 2,603 NRWS Capacity Units (CU) CUs would need to be purchased. Note that, as outlined in the Project Description, the NRWS has a current flow of 20,000 gpd. The AWPF would contribute an additional anticipated 1,027,300 gpd to the NRWS. The NRWS capacity is 4.6 MGD leaving more than three quarters of the system's capacity available for use by other entities in the region should brine disposal be required.

Additionally, a new 6,800-foot 8-inch HDPE brine line is anticipated to connect to the IEBL, with a possibility for jack and bore to be required in order to install this section of pipeline. It has been verified that the existing IEBL infrastructure would be able to accommodate the brine stream at the point of connection and downstream. One agency CU would need to be purchased to accommodate this CBP facility. Note that, as outlined in the Project Description, the IEBL has a current flow of 22,000 gpd. The three wellhead-treatment system(s) would contribute an additional anticipated 4,900 gpd per facility to the IEUA. The NRWS capacity is 1.9 MGD leaving a vast majority of the system's capacity available for use by other entities in the region should brine disposal be required.

Should the IEUA require greater capacity of the brine disposal facilities than is presently available, it would not be possible to determine whether these facilities would require OCSD (or another agency responsible for treating brine waste) to expand the capacity of its treatment plant to accommodate the additional brine waste generated by the CBP facilities. As such, MM **UTIL-4**, which requires subsequent CEQA documentation to be prepared for certain projects, is required to minimize potential impacts below significance thresholds.

As with the impacts outlined above under Project Category 1, the construction of these upgrades and improvements are not anticipated to generate additional demand for capacity from the wastewater treatment provider due to the limited wastewater this would generate. Given that the proposed CBP is not anticipated to generate additional demand for these existing facilities, the programs proposed to be implemented as part of the CBP and associated facilities therefore are not anticipated to require substantial additional capacity from the applicable area wastewater treatment provider beyond the provider's existing commitments. Impacts would be less than significant with the implementation of mitigation identified below.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-4 ***Should the agencies operating the brine disposal systems (Orange County Sanitation District [OCSD]and Los Angeles County Sanitation District [LACSD]) determine that the capacity requested on behalf of CBP operations is greater than that which can be accommodated with existing treatment capacities, subsequent CEQA documentation addressing the required facility expansions shall be prepared. I.e., should the CBP require access to greater capacity from an existing brine disposal system (including the IEBL, the NRWS, or the Etiwanda Wastewater Line [EWL]) beyond that which can be accommodated by existing facilities--excluding pipeline connections required to connect CBP facilities to these brine disposal systems (such as the 8,200 LF proposed to be installed as part of the CBP)—subsequent CEQA documentation shall be prepared.***

Level of Significance After Mitigation: Less Than Significant

Implementation of MM **UTIL-4** is sufficient to reduce the potential for impacts related to capacity of area wastewater treatment plants to below significance thresholds, as it would ensure that subsequent CEQA documentation is required where the overall CBP would require greater brine conveyance capacity than area brine disposal facilities can accommodate.

Cumulative Impact Analysis

Level of Significance Before Mitigation: Potentially Significant

Future cumulative development within the Chino Basin is expected to demand additional capacity from the available wastewater treatment providers. In general, IEUA and other area wastewater collection agencies have available capacity to accommodate the anticipated population growth and subsequent demand for their services in the future, or these agencies have developed long-term plans that address growth through the expansion of their facilities. Regardless, this cumulative increase could result in inadequate capacity of the wastewater treatment plant(s) to serve the additional demand. However, the 2017 IEUA Facilities Master Plan EIR (FMP EIR) addressed long term projection of growth and capacity needs within the IEUA service area and models capacity utilization of the four Regional Water Recycling Plants (RWRPs). The projects proposed within the WFMP would ensure that IEUA would have adequate capacity to treat wastewater for the region; therefore, the cumulative contribution to wastewater treatment from area growth has been previously analyzed, and was determined to be less than cumulatively considerable.

As discussed in the previous analysis, the proposed CBP would require a large brine disposal capacity to accommodate the proposed AWPF and wellhead treatment systems. Both the IEBL and NRWS would have a remaining capacity, when considering the capacities required to accommodate the CBP, greater than three quarters of the total capacity for these brine disposal systems. As such given that the proposed CBP would utilize mitigation that would ensure subsequent CEQA documentation to address expanded brine disposal capacities, should they be required, the CBP would reduce the overall impacts to less than cumulatively considerable. This is because the CBP would ensure that, if required subsequent CEQA documentation is require, it would address the need for additional brine disposal capacities, thus ensure that capacity is available for existing and future cumulative development.

Because the project would result in a less than significant impact with mitigation related to wastewater capacities, the project's contribution to cumulative impacts is not considered

cumulatively considerable, and therefore, would not contribute to a significant cumulative impact on the availability of wastewater treatment.

Level of Significance After Mitigation: Less Than Significant

d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Construction of wells would not require a large area of construction. Construction of each well may require demolition of existing facilities, grading, soil import/export, etc. at a specific site. Given that the proposed wells would be located within sites no more than one half acre in size, it is not anticipated that construction thereof would generate substantial solid waste. Furthermore, it is not anticipated that more than 3 of the proposed wells would be installed concurrently; as such, the generation of solid waste from each well would not have a potential to exceed the daily capacity of the local landfills. Each of the CBP facilities would include the preparation of a construction and demolition solid waste management plan as required by San Bernardino County or Riverside County for all new construction projects. Information provided in this waste management plan would include how the waste would be managed, hauler identification, and anticipated material wastes. Each plan would demonstrate a minimum of 50 percent diversion of construction building materials and demolition debris from landfills through reuse or recycling, which is required by AB 939. As such, development of wells is not anticipated to generate solid waste in excess of the capacity of local infrastructure. Impacts would be less than significant with mitigation provided below.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12” and 72” in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Similar to the development of wells, construction of pipelines and ancillary facilities is not anticipated to result in generation of solid waste in excess of the capacities of local infrastructure. However, given that pipelines would require demolition of sections of roadway in order to install conveyance facilities below ground and within rights-of-way, mitigation is required to ensure that all materials that can feasibly be recycled are salvaged. With the implementation of mitigation identified below, impacts would be less than significant.

Project Category 3: Groundwater Storage Increase
This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to result in impacts to solid waste capacities.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which will be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

While the installation of the proposed AWPF would occur over a large area within the existing RP-4 site, solid waste generation is anticipated to be minimized through the implementation of mitigation. Therefore, impacts are the same as those identified under Project Categories 1 and 2—mitigation is required to address potential impacts to solid waste capacities.

Combined Project Categories

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

UTIL-5 ***The contract with demolition and construction contractors for a given CBP project shall include the requirement that all materials that can feasibly be recycled shall be salvaged and recycled. This includes but is not limited to wood, metals, concrete, road base and asphalt. The contractors for a given CBP project shall submit a recycling plan to IEUA for review and approval prior to issuance of permits for the construction of demolition/construction activities.***

UTIL-6 ***The contract with demolition and construction contractors for a given CBP project shall include the requirement that all soils that are planned to be exported from the site that can be recycled shall be recycled for re-use; alternatively, soils shall be reused on site to balance soil import/export.***

Level of Significance After Mitigation: Less Than Significant

Implementation of mitigation measure **UTIL-5** will ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities. Similarly, MM **UTIL-6** will ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. This too will minimize the potential for CBP projects to generate waste in excess of local landfill capacities.

Cumulative Impacts

Level of Significance Before Mitigation: Potentially Significant

Future cumulative development within the IEUA would cumulatively contribute to the generation of solid waste and disposal of solid waste at the El Sobrante and Mid-Valley Landfill landfills. Based on growth projections, these two landfills have approximately 25 to 30 more years of capacity. Future cumulative development could eventually exceed the capacities of these landfills.

Therefore, cumulative development could result in significant impacts to landfills. Because the proposed CBP would not substantially increase the generation of solid waste, particularly with the implementation of MMs **UTIL-5** and **UTIL-6**, the project's contribution to cumulative effects on landfills would be less than cumulatively considerable, and therefore, would result in a less than significant contribution to cumulative impacts.

Level of Significance After Mitigation: Less Than Significant

e) Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to 9 existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Implementation of the proposed wells would comply with all applicable city, county, and State construction and demolition requirements during construction of the proposed facilities as described above in the regulatory setting. All excavated soil would be hauled offsite by truck to an appropriately permitted solid waste facility. The daily amount of soil to be disposed per day would not exceed the maximum permitted throughput for each waste type (i.e., non-hazardous and hazardous). Furthermore, other solid waste would be disposed of at an appropriately permitted solid waste facility. The daily amount of solid waste to be disposed per day would not exceed the maximum permitted throughput for each waste type (i.e., non-hazardous and hazardous). Any hazardous materials collected on a given CBP project site during either construction or operation would be transported and disposed of by a permitted and licensed hazardous materials service provider. As stated above under issue 4.20(d), CBP projects would be required, through the implementation of MM **UTIL-5** to recycle construction and demolition materials beyond the mandated 50 percent diversion required by AB 939. Furthermore, MM **UTIL-6** would require further diversion through the recycling of soils where possible for future CBP projects. The proposed development of wells would comply all federal, State, and local statues related to solid waste disposal. Therefore, the proposed CBP would result in less than significant construction impacts with the implementation of mitigation.

The cities and/or county in which a given project would be located are required to comply with the California Integrated Waste Management Act of 1989, requiring diversion of solid waste from landfills through reuse and recycling. Facilities proposed as part of the CBP would be required to recycle as part of the projects' operational activities. Additionally, any hazardous materials collected on the project site during either construction or operation of future development within the CBP would be transported and disposed of by a permitted and licensed hazardous materials service provider. This is a mandatory requirement; compliance does not require mitigation. As such, the proposed CBP facilities would comply with federal, State, and local management and reduction statutes and regulations related to solid waste. Impacts are less than significant.

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the

entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Impacts are the same as those identified under Project Category 1.

Project Category 3: Groundwater Storage Increase

This Project Category includes an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

The proposed expansion of the safe storage capacity would not result in any above ground impacts beyond those facilities associated with the CBP designed to support this expansion as discussed herein. As such, the proposed expansion has no potential to violate federal, State, and local management and reduction statutes and regulations related to solid waste.

Project Category 4: AWPF and Other Water Treatment Facilities

This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and will ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

While the installation of the proposed AWPF would occur over a large area within the existing RP-4 site, the AWPF is anticipated to be comply with solid waste regulation, and impacts would be minimized through the implementation of mitigation. Therefore, impacts are the same as those identified under Project Categories 1 and 2—mitigation is required to address potential impacts to solid waste capacities.

Combined Project Facilities

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures: Mitigation measures **UTIL-5 and UTIL-6** outlined under issue 4.20(a) above are required.

Level of Significance After Mitigation: Less Than Significant

As stated above under issue 4.20(d), implementation of MMs **UTIL-5 and UTIL-6** will ensure that recyclable waste streams are diverted from the local landfill, thereby ensuring compliance with the required 50 percent waste diversion mandated by the State.

Cumulative Impacts

Level of Significance Before Mitigation: Potentially Significant

Potential cumulative impacts related to solid waste facilities and solid waste disposal would occur if projects within the IEUA service area would be served by a facility without sufficient permitted capacity to accommodate solid waste disposal needs, or if cumulative projects do not comply with federal, State, and local statutes and regulations related to solid waste. Specifically, projects producing solid waste during project implementation, including cleanup, residential and

commercial projects, could produce a waste stream that could together not be accommodated by current solid waste facilities within regional solid waste disposal areas, resulting in a cumulatively considerable impact to solid waste facilities.

The proposed CBP projects would comply with all federal, State, and local statues and regulations related to solid waste and would not result in potential significant impacts. When added to cumulative projects, the effects of the proposed CBP projects would contribute incrementally to the cumulative impacts on solid waste facilities.

Cumulative projects would generally be served by the local municipal solid waste disposal facilities and hazardous waste disposal facilities, resulting in potential cumulative impacts to solid waste facilities. However, new cumulative development projects would participate in local programs designed to divert 50 percent of waste from landfills. In addition, all cumulative projects implemented in the area would also be required to comply with federal, State, and local solid waste regulations and statutes. Therefore, when considered in addition to the anticipated impacts of other cumulative projects, and when considering that MMs **UTIL-5** and **UTIL-6** would minimize the CBP's individual potential to contribute to cumulative violations of solid waste regulations, the proposed project's incremental contribution to solid waste facility capacity impacts would not be cumulatively considerable, and therefore, would result in a less than significant contribution to cumulative impacts.

Level of Significance After Mitigation: Less Than Significant

4.20.6 Cumulative Impacts

The cumulative analysis of each Utilities and Service System issue evaluated in this Subchapter 4.20 determined that the proposed project would result in a cumulatively considerable contribution to cumulative utilities and service system impacts within the Chino Basin, even with the implementation of mitigation measures. Such impact would occur as a result of construction of water and wastewater related facilities proposed by the CBP potentially resulting in cumulatively considerable contributions to GHG emissions. All other issues were determined to contribute less than cumulatively considerable contributions to utilities and service systems impacts as the potential for the proposed CBP to result in a cumulatively considerable contribution to such impacts has been minimized through the implementation of mitigation measures.

4.20.7 Unavoidable Significant Adverse Impacts

The foregoing evaluation demonstrates that the construction of the proposed water and wastewater facilities would result in a significant impact, thereby, a significant impact under Utilities and Service Systems is anticipated as a result of implementation of the CBP. This is because the CBP would develop water and wastewater facilities that would contribute to significant construction-related GHG emissions. As such, though MM **GHG-1** would reduce construction related GHG emissions to the greatest extent feasible, construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. Thus, the proposed CBP would result in a significant and unavoidable impact related to construction of new or expansion or modifications to existing water and wastewater facilities. All other impacts related to Utilities and Service systems have been determined to be less than significant with implementation of mitigation identified herein.

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4.21 WILDFIRE

4.21.1 Introduction

This subchapter evaluates the environmental impacts to wildfire hazards from implementation of the CBP. The following topics address whether the proposed project is located in or near State responsibility areas or lands classified as very high fire hazard severity zones (FHSZ), has a potential to impair an adopted emergency plan, has a potential to exacerbate the spread of a wildfire, may require fire prevention infrastructure that may exacerbate the spread of wildfire, or may expose people or structures to downstream flooding or landslides as a result of post-fire instability. The purpose of this subchapter is to identify and provide analysis and assessment of the potential for wildfire hazards to exist within the CBP project area or the sensitivity for such a threat to be encountered at a future specific project site, and ultimately determine if implementation of the CBP would result in a significant wildfire impact. The analysis provided in this section may be utilized and incorporated into the planning process for future infrastructure and entitlement compliance considerations.

These issues will be discussed below as set in the following framework:

- Introduction
- Environmental Setting: Wildfire
- Regulatory Setting
- Thresholds of Significance
- Potential Impacts
- Cumulative Impacts
- Unavoidable Adverse Impacts

References utilized for this section include:

- County of San Bernardino, November 1, 2018. *General Plan*.
- California Public Utilities Commission, *Fire Threat Map* as accessed September, 2021 at https://ia.cpuc.ca.gov/firemap/
- CAL FIRE, California Fire Hazard Severity Zone Viewer as accessed September, 2021 at https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414
- City of Fontana. 2018. General Plan, Noise and Safety Element as accessed September, 2021 at https://www.fontana.org/DocumentCenter/View/26750/Chapter-11---Noise-and-Safety
- City of Rancho Cucamonga. 2010. General Plan as accessed September, 2021 at https://www.cityofrc.us/sites/default/files/2020-12/General%20Plan_4.pdf
- City of Upland. 2015. General Plan as accessed September, 2021 at https://www.uplandca.gov/uploads/ftp/City_departments/development_services/planning/general_plan_map/pdfs/00_Introduction.pdf

No comments pertaining to wildfire threats were received in response to the Notice of Preparation, and no comments were received at the scoping meeting held on behalf of the CBP.

4.21.2 Environmental Setting / Project Location

In general, various communities in the mountain and foothill areas in San Bernardino County are at a high risk for wildfire. According to the California Department of Forestry and Fire Protection (CAL FIRE) Wildfire Activity Statistics Redbooks (Redbooks) from the years 2014 to 2019[1], 735

[1] https://www.fire.ca.gov/media/10062/2014_redbook_complete.pdf, https://www.fire.ca.gov/media/10061/2015_redbook_final.pdf, https://www.fire.ca.gov/media/10060/2016_redbook_final.pdf, https://www.fire.ca.gov/media/10059/2017_redbook_final.pdf, https://www.fire.ca.gov/media/11146/2018_redbook_final.pdf, https://www.fire.ca.gov/media/iy1gpp2s/2019_redbook_final.pdf

fires totaling 11,433 acres caused a number of injuries, and resulted in an estimated $16,900,013 in damages to property, crops, public facilities and infrastructure (averaging about $2,826,669 per year, with the greatest costs generally corresponding to the years with the greatest burn acreage). This is primarily due to location, vegetation, weather, seasonal Santa Ana Winds, and prolonged drought. The above excludes the 2020 fire season, which was a particularly severe fire season throughout California due to drought conditions. In 2020, one of the largest fires in the area in recent history—the El Dorado Fire—took place in the San Bernardino National Forest in San Bernardino and Riverside Counties. It was caused by a human error as a result of a malfunctioning pyrotechnic device and consumed 22,744 acres, destroyed 20 structures, and claimed the life of one firefighter. The El Dorado Fire continued burning for more than 4 weeks, surpassing the duration of any previous fires in the Inland Empire.[2]

In urban areas, urban fires include fires within individual commercial, industrial, and residential structures, vehicles, and vacant lots. The effectiveness of responding to urban fires is generally based on the age of the structures, proximity of the nearest fire station, efficiency of circulation routes, and water availability to fight fires.

Wildland-urban interface fires occur in areas where urban/suburban development meets wildland areas. Wind-driven wildland-urban interface fires pose a significant threat to lives and have increased potential to cause significant damage to structures. In wildland and wildland-urban interface areas, cities and counties require the use of fire-resistant building materials, implementation of fuel modification zones, and maintenance of vegetation clearance around structures to protect development from wildland fires, thereby reducing the potential loss of life and property.

CAL FIRE maps the FHSZ for the cities within the Chino Basin. The FHSZ are based on an evaluation of fuels, topography, dwelling density, weather, infrastructure, building materials, brush clearance, and fire history. The Chino Basin contains moderate, high, and very high FHSZ. These zones are shown on **Figure 4.21-1**.

As shown on **Figure 1** in the project description (CBP Infrastructure), a substantial majority of the proposed infrastructure would occur between Interstate 210 to the north and State Route 60 to the south. One proposed pump station and one potable water pipeline would extend just north of Interstate 210 to Lloyd W. Michael Water Treatment Plant (LWMWTP). **Figure 4.21-1** shows the FHSZ in the State Responsibility Areas and Local Responsibility Area (**Figure 4.21-1**). With the exception of the two referenced facilities north of Interstate 210, all other proposed facilities would be located in non-high severity wildland fire areas. The Western Riverside County Regional Wastewater Authority (WRCRWA) pipeline extends through a similar area, i.e., a non-high severity wildland fire area. Ultimately, there may be small areas within the footprint of the proposed CBP that contain “wildland vegetation,” but these can only be determined once final facility sites are selected.

4.21.2.1 Evacuation Routes

Major evacuation routes within the San Bernardino Valley are shown on **Figure 4.21-2**, which depicts the San Bernardino Countywide Plan Evacuation Route Map in the vicinity of the project area. Evacuation routes include, but are not limited to, Interstates 10, 15 and 215; State Routes 30, 31, 60, 66, 71, and 83; and numerous major and secondary highways and roadways.

[2] https://www.fire.ca.gov/media/hsviuuv3/cal-fire-2020-fire-siege.pdf

4.21.3 Regulatory Setting

There are numerous State, Federal, and local regulations regarding wildfire planning, forest management, and wildfire responsibility. However, because the proposed CBP infrastructure are mostly located in outside areas where wildfire hazards or urban-interface hazards have been mapped, or have historically occurred, only those regulations that relate to urban fires are identified in this section.

4.21.3.1 State

California Fire Code
The California Fire Code (CFC) is a series of building, property, and lifeline codes outlined in Title 24, Chapter 9 in the California Code of Regulations. The CFC is based on the International Fire Code, which is a collection of best practices agreed upon by professional fire agencies and organizations. The CFC uses a hazards classification system to outline the measures to take to protect life and property. It also regulates hazardous materials at fixed facilities. The CFC, along with the California Building Code (CBC), is updated every three years to incorporate recommendations by the International Code Council.

Senate Bill 1241 of 2012
Senate Bill (SB) 1241, enacted in 2012, amended California Government Code Section 65302 to address wildfire safety in general plans. SB 1241 requires that updates to general plan safety elements address wildfire risk in State Responsibility Areas and Very High FHSZs in Local Responsibility Areas.

Fire Responsibility Areas
CAL FIRE has designated three zones or responsibility areas, depending on the agency with primary financial responsibility for addressing the prevention, suppression, and postfire recovery of fire. These include local responsibility areas (LRA), State responsibility areas (SRA), and Federal responsibility areas (FRA), defined as follows:

- LRA are the areas of California where local jurisdictions (e.g., city fire departments, fire protection districts, counties, and CAL FIRE under contract to local government) are responsible for the prevention and suppression of wildfires.
- SRA are the areas of California where the State of California is financially responsible for the prevention and suppression of wildfires. SRA do not include lands within city boundaries or in Federal ownership.
- FRA are the areas of California where the Federal government has the primary financial responsibility for preventing and suppressing fires. FRA are generally protected by a variety of Federal agencies.

4.21.3.2 Local

San Bernardino Countywide Plan
The following San Bernardino Countywide Plan policies addressing wildfire are applicable to the project:

Goal **Hazards Element**

HZ-1 **Natural Environmental Hazards**
Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.

Policies HZ-1.2 New development in environmental hazard areas. We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.

- Flood: 100-year flood zone, dam/basin inundation area
- Geologic: Alquist Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area)
- Fire: high or very high fire hazard severity zone

HZ-1.6 Critical and essential facility location. We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.

HZ-1.7 Underground utilities. We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.

HZ-1.9 Hazard areas maintained as open space. We minimize risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.

HZ-1.13 Fire protection planning. We require that all new development in County-designated Fire Safety Overlay and/or CAL FIRE-designated Very High Fire Hazard Severity Zones meet the requirements of the California Fire Code and the California Building Code as amended by the County Fire Protection District, including Title 14 of the California Code of Regulations fire safety requirements for any new development within State Responsibility Areas, as well as provide and maintain a Fire Protection Plan or Defensible Space/Fuel Modification Plan and other pre-planning measures in accordance with the County Code of Ordinances.

HZ-1.14 Long-term fire hazard reduction and abatement. We require proactive vegetation management/hazard abatement to reduce fire hazards on existing private properties, along roadsides of evacuation routes out of wildfire prone areas, and other private/public land where applicable, and we require new development to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel modification, and roadside fuel reduction in the Fire Safety Overlay and/or Very High Fire Hazard Severity Zones.

HZ-1.15 Evacuation route adequacy. We coordinate with CAL FIRE, California's Office of Emergency Services, and other local fire districts to identify strategies that ensure the maintenance and reliability of evacuation routes potentially compromised by wildfire, including emergency evacuation and supply transportation routes.

City of Fontana General Plan
The following City of Fontana General Plan actions addressing wildfire are applicable to the project:

Noise and Safety Element

Goal 3 **The City of Fontana is a community that implements proactive fire hazard abatement strategies, and as a result, is minimally impacted by wildland and urban fires.**

Action B. Require residential, commercial, and industrial structures to adhere to applicable fire codes for buildings and structures, fire access, and other standards in accordance with Fire Hazard Overlay District, California Fire Code, and City of Fontana Municipal Code, encourage of retrofit of non-conforming land uses.

D. Require adherence to fuel modification and defensible space requirements to reduce wildfire hazards; work with CAL FIRE to coordinate fuel breaks in very high fire severity zones.

E. Ensure compliance with the Subdivision Map Act requirements for structural fire protection and suppression services, subdivision requirements for on/off-site improvements, ingress and egress, street standards, and other concerns.

F. Continue to work with public and private water distribution and supply facilities to ensure adequate water capacity and system redundancy to supply emergency firefighting needs.

City of Rancho Cucamonga General Plan

The following City of Rancho Cucamonga General Plan policies addressing wildfire are applicable to the project:

Land Use and Community Character Element

Policy LC-2.9: Buffer Zones. Require development projects to incorporate buffer zones when determined to be necessary or desirable to serve as managed open space for wildfire safety and vegetation fuel modification.

Open Space Element

Policy OS-1.10: Buffer Zones. Provide buffer zones, as appropriate and necessary, to serve as managed open space for wildfire safety and vegetation fuel modification. Buffer zones may include trails, small recreational amenities, information kiosks and signage, and even staging points for fire vehicles.

Mobility and Access Element

Policy MA-3.4: Emergency Access. Prioritize development and infrastructure investments that work to implement, maintain, and enhance emergency access throughout the community.

Resource Conservation Element

Policy RC-3.7: Urban Forestry Plan. Minimize damage associated with wind- and fire related hazards and risks and address climate change and urban heat island effects through the development of an urban forestry plan that addresses and proper and appropriate landscaping, plant and tree selection and replacement, planting and vegetation management techniques.

Safety Element

Goal S-3: WILDFIRE HAZARDS. A community where wildfire impacts are minimized or reduced through investments in planning and resilience.

Policies S-3.1: Fire Risk Reduction. Apply all State and local codes and regulations (fire safe design, adherence to Standard 49-1) to new development, redevelopment, major, and existing non-conforming uses remodels in the WUIFA.[3]

S-3.2: Fire Protection Plans. All new development, redevelopment, and major remodels in the WUIFA will require the preparation of Fire Protection Plans (FPPs) to reduce fire threat, in accordance with Fire District policies and procedures.

S-3.3: Vegetation Management. Owners of properties and public/ private roads within and adjacent to the WUIFA are required to conduct brush clearance and fuel modification to reduce fire ignition potential and spread.

S-3.4: Buffer Zones. Require development projects to incorporate buffer zones as deemed necessary by the City's Fire Marshal for fire safety and fuel modification.

S-3.5: Water Supply. All developments will meet fire flow requirements identified in the Fire Code.

S-3.6: Coordination with Agencies. Coordinate with State, regional, and local agencies and service providers on fire risk reduction planning and activities.

S-3.7: Wildfire Awareness. Assist residents and property owners with being better informed on fire hazards and risk reduction activities in the WUIFA.

S-3.8: New Essential Facilities (WUIFA). Prohibit the siting of new essential public facilities (including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities) within the WUIFA, unless appropriate construction methods or strategies are incorporated to minimize impacts.

City of Upland General Plan

The following City of Upland General Plan policies addressing wildfire are applicable to the project:

Safety Element

Goal SAF-4 A community protected from loss of life, injury, damage to property and loss of natural resources caused by wildland and urban fires.

Policies SAF-4.3 Development. Continue to require all development, new and existing, to provide necessary service, fire hydrants and road improvements consistent with the California Fire Code.

SAF-4.6 High Fire Hazard Safety Zones. Require all development in areas of potential wildland fire hazards, as shown in the High Fire Hazard Map, to include clearance around structures, fire-resistant ground cover and fire-resistant roofing materials.

SAF-4.11 Water Supplies for Fire Suppression. Ensure that adequate water supplies are available for fire-suppression throughout the City.

[3] Wildland-Urban Interface Fire Area (WUIFA)

4.21.4 Thresholds of Significance

Appendix G, Section XX of the CEQA Guidelines indicates that a project would normally have a significant effect on the environment if the project is located in or near SRA or lands classified as very high FHSZs, and would:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan.
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

It should be noted for this assessment that the proposed CBP infrastructure would mostly be located outside, and not adjacent to, any SRA or lands classified as very high FHSZ.

4.21.5 Potential Impacts

The location of potential future projects range between well-defined to relatively uncertain at this time, but the various facility infrastructure components would occur mostly within urban areas (refer to **Figure 1**), not in very high FHSZ. The impact assessment presented below focuses on physical changes to the landscape at a project site and any potential adverse impacts these changes may have on any wildfire threats that exist at the site or as a result of the project. For purposes of the impact forecast, it is assumed that over the next seven years, all proposed CBP infrastructure would be implemented as described in the Project Description.

a) Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The highly urbanized portion of the Chino Basin has been designated by the CAL FIRE as outside of the very high FHSZ. **Figure 4.21-1** shows the FHSZs in the relevant portions of San Bernardino and Riverside Counties that encompass the Chino Basin. Almost all “high” or “severe” wildland FHSZs are located on the edges of the Chino Basin, or adjacent to isolated hills that are undeveloped, such as the Jurupa Hills that outcrop within the slope of the Chino Basin alluvial fan.

With the exception of two project features, a pipeline north of Interstate 210 and a pump station in the vicinity of the LWMWTP, all of the proposed CBP infrastructure would be located within urban areas designated as non-very high FHSZs in LRAs.

With the exception of conveyance facilities (pipelines), all proposed project facilities (AWPF, wells, wellhead treatment, pump stations, and storage of up to 150,000 acre-feet of water in the Chino Basin) would be contained within the boundaries of their specific sites which would not include any roadways. Project-related vehicles would not block existing street access or use. Therefore, with the exception of conveyance facilities (pipelines), no impacts related to emergency evacuation plans would occur from installation and operation of proposed CBP infrastructure facilities. Operation of the proposed facilities would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts related to an adopted emergency plan would be considered less than significant during project operation.

Installation of pipelines would include construction of an estimated 30 miles of new pipelines, and most of this construction effort would occur within existing road rights-of-way (ROW) within the planning area. The construction of the pipelines would require construction along or in public roadways and could interfere with adopted emergency response plans or emergency evacuation plans. With minor exceptions, all proposed pipelines would be constructed within public ROW. This construction activity, and other anticipated construction activity associated with conveyance systems, could potentially block access to roadways and driveways for emergency vehicles for short periods. The construction-related impacts, although temporary, could potentially impair implementation of or physically interfere with an adopted emergency response plan and/or emergency evacuation plan. Impacts could be potentially significant. Mitigation Measure (MM) **WF-1**, which requires consistency with the San Bernardino County Operational Area Emergency Response Plan (SBCOAE), as well as review and approval by the local agency with authority over construction within the public ROW, would be required to reduce these potential temporary significant impacts to a less than significant level. The SBCOAE provides wildfire mitigation efforts that include the goal of continuing to reduce fire hazards in the County, and generally coordinates evacuation in the event of an area emergency, which includes area wildfires.

Following construction, operation of the pipelines would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan as they would be located underground. Aboveground ancillary facilities would require periodic maintenance. Maintenance activities would require minimal trips and would not significantly impact the surrounding roadways, or significantly impact implementation of emergency response plans and/or emergency evacuation plans. Impacts related to adopted emergency plans and emergency evacuation plans would be considered less than significant during operation for the project-related conveyance facilities.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

WF-1**:* ***Prior to initiating construction of proposed facilities within public rights-of-way (ROW), IEUA shall prepare and implement a Traffic Control Plan that contains comprehensive strategies for maintaining emergency access during construction. Strategies shall include, but are not limited to, maintaining steel trench plates at the construction sites to restore access across open trenches, flag persons and related assets to manage the flow of traffic, and identification of alternate routing around construction zones, where necessary. In addition, police, fire, and other emergency service providers (local agencies, Caltrans, and other service providers) shall be notified of the timing, location, and duration of the construction activities and the location of detours and lane closures. IEUA shall ensure that the Traffic Control Plan and other construction activities are consistent with the San Bernardino County Operational Area Emergency Response Plan, and are reviewed and approved by the local agency with authority over construction within the public ROW.

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, potential significant impacts to emergency access would be reduced to a less than significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan by constructing facilities within public ROW. Since the proposed CBP pipelines would be constructed within public ROW, the proposed project's contribution to the cumulative impact would be considerable requiring implementation of MM **WF-1** to reduce the project's contribution to this significant cumulative impact.

*Cumulative Measures: Implementation of MM **WF-1** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **WF-1** would ensure that the proposed project's contribution to cumulative emergency access and evacuation impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific Traffic Control Plan with comprehensive strategies to reduce/control disruption to emergency access and evacuation plans.

b) Would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?

The project area and the sites where proposed facilities would be installed are either flat or have shallow slopes, and, with the exception of two facilities to be located north of Interstate 210, are entirely located within non-very high FHSZs in LRAs. Implementation of the proposed project would not substantially exacerbate wildfire risks.

Santa Ana winds are common in the San Bernardino region. The project would result in the installation of a new AWPF, wells, pump stations, wellhead treatment facilities, pipelines, and additional water stored in the Chino Basin. With the exception of the existing water treatment plant, RP-4, at which the AWPF is proposed, none of the proposed facilities would be permanently occupied. Smoke from wildfires that may occur in the severe wildland fire hazard areas to the north (foothills and mountains) may generally impact air quality throughout the CBP region during a fire. Santa Ana winds are generally from the north and northeast, and the San Bernardino Valley (including the project area) employees in the project area could be exposed to the plume of smoke from a wildfire in the San Bernardino Mountains. However, the proposed project would not result in a significant increase in human exposure and exposure would be short-term. The same Santa Ana winds that could blow the plume towards the valley floor, including within the project area, can disperse the plume during and immediately after the wildfire is controlled. Due to the short-term exposure of the project area to a wildfire plume, no significant adverse exposure is forecast to occur for future employees that would support the proposed CBP infrastructure.

Finally, due to the character of the facilities (low potential to cause ignition of a wildland fire and their location, well outside of the severe FHSZ), the proposed CBP would not contribute substantially to the uncontrolled spread of a wildfire.

None of the CBP facility operations would have a potential to bring new project occupants into a high or very high FHSZs. Even the two proposed facilities north of Interstate 210 would be located within road ROW or within the totally disturbed LWMWTP compound. However, during construction, because some project components may be installed in locations designated as high

FHSZ, construction may exacerbate fire risk temporarily as a result of accidental sparks generated by spark-producing equipment. As such, the proposed project requires the MM **WF-2**, which would minimize fire risk during activities that would utilize spark-producing equipment by requiring spark arrestors for construction equipment that could create a spark, and requiring construction crews and vehicles to have access to functional fire extinguishers and fire prevention equipment at all times during construction. Implementation of MM **WF-2** is required to ensure that the exposure of future CBP infrastructure that may be located within high or very high FHSZs would not be exposed to severe damage or loss.

Level of Significance Before Mitigation: Potentially Significant

Mitigation Measures:

WF-2: ***Prior to construction of facilities located in areas designated as High or Very High Fire Hazard Severity Zones (FHSZs) by CAL FIRE, fire hazard reduction measures shall be incorporated into a fire management plan/fuel modification plan for the proposed facility, and shall be implemented during construction and over the long-term for protection of the site. These measures shall address all staging areas, welding areas, or areas slated for development that are planned to use spark-producing equipment. These areas shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that can include a spark arrestor shall be equipped with a spark arrestor in good working order. During the construction of the project facilities, all vehicles and crews working at the project site shall have access to functional fire extinguishers and related fire prevention equipment (such as emergency sand bags, etc.) at all times. In addition, construction crews shall have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks. This plan shall be reviewed by the IEUA and provided to CAL FIRE for review and comment, where appropriate, and approved prior to construction within high and very high FHSZs and implemented once approved. The fire management plan shall also include sufficient defensible space or other measures at a facility site located in a high or very high FHSZ to minimize fire exposure and damage to a level acceptable to the IEUA over the long-term.***

Level of Significance: Less Than Significant with Mitigation Implementation

The implementation of MM **WF-2** would require the preparation of a fire management plan/fuel modification plan with comprehensive strategies to reduce the potential to exacerbate wildfire risks or cause a wildfire to occur, and thereby expose project occupants (there would be minimal occupants of proposed facilities) to pollutant concentrations from a wildfire or contribute to the uncontrolled spread of wildfire. Therefore, potential significant impacts to the spread of wildfires would be reduced to a less than significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could expose future residents to pollutant concentrations from a wildfire or contribute to the uncontrolled spread of wildfire resulting in a significant cumulative impact. The proposed CBP infrastructure would primarily be constructed within urban areas or non-very high FHSZs in LRAs or, if a facility must be located within a severe FHSZ, MM **WF-2** would be implemented, reducing the project specific impacts to below significance thresholds. As such, while exposure to pollutant concentrations from wildfires in the Chino Basin area may occur as a result of cumulative development within very high FHSZs, with the implementation of MM **WF-2**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences.

*Cumulative Measures: Implementation of MM **WF-2** is required.*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **WF-2** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would be reduced to less than cumulatively considerable impact by requiring the preparation and implementation of a project specific fire management plans with comprehensive strategies to reduce/control contribution to the spread of wildfire. IEUA would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

c) Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

At this time no specific CBP infrastructure is proposed for areas designated as high or very high FHSZs on the Fire Hazard Severity Zone maps provided on **Figure 4.21-1**. Thus, the potential that such facilities can exacerbate fire risk or cause short- or long-term impacts to the environment related to this hazard is minimal. Nonetheless, it is possible that CBP Infrastructure facilities could be implemented in the future on the alluvial slopes immediately south of the San Gabriel Mountains, an area with a Very High FHSZ designation. Installation of those facilities in these locations could exacerbate fire risk in these areas as a result of spark-producing equipment use during operations and construction, and could therefore result in both temporary and ongoing impacts on the environment. However, the implementation of MM **WF-2** under such circumstances would be available to reduce any contribution to greater fire risk to a less than significant impact level. Thus, the proposed project would not result in any significant adverse wildfire impacts with implementation of mitigation.

*Mitigation Measures: Implementation of MM **WF-2** is required*

The implementation of MM **WF-2** would require the preparation of a fire management plan/fuel modification plan for CBP infrastructure proposed within very high FHSZs, and it would identify comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential significant impacts due to installation of proposed CBP infrastructure would be reduced to less than significant level.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could exacerbate fire risk or may result in temporary or ongoing impacts to the environment as a result of development located within very high FHSZs. Since the proposed CBP infrastructure would primarily be constructed within urban areas or non-very high FHSZs in LRAs or, if a facility must be located within a FHSZ, MM **WF-2** would be implemented, proposed project impacts would be not be cumulatively considerable. As such, while installation or maintenance of the proposed project may exacerbate fire risk in the region as a result of cumulative development within very high FHSZs, with the implementation of mitigation measure **WF-2**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences.

*Cumulative Measures: Implementation of MM **WF-2** is required*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **WF-2** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific fire management plan with comprehensive strategies to reduce/control contribution to the spread of wildfire. IEUA would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

d) Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As noted in the preceding discussion, no specific CBP infrastructure is proposed for areas designated as high or very high FHSZs as mapped on **Figure 4.21-1**. The facilities most likely to be installed within very high FHSZs are pipelines and pump stations that may be installed at the northern edge of the Chino Basin on the alluvial fans of the San Gabriel Mountains. Pipelines have a small surface footprint that can be constructed to minimize potential fire hazards (as required by MM **WF-2**) and would not cause significant damage downstream from their location. Thus, based on this evaluation, construction and operation of CBP infrastructure can be accomplished without causing potentially significant impacts through the implementation of MM **WF-2**.

The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, due to CBP infrastructure locations outside of very high FHSZs in LRAs, i.e., urban areas. Additionally, no construction, other than potentially pipeline crossing improvements, may occur across any of the north-south oriented stream channels that flow out of the San Gabriel Mountains. Thus, no significant drainage changes would occur within the project area that may be exposed to indirect impacts from wildfire.

Based on the above discussion, implementation of MM **WF-2** is required to minimize the potential for development of the CBP to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes to a level of less than significant.

*Mitigation Measures: Implementation of MM **WF-2** is required*

The implementation of MM **WF-2** would require the preparation of a fire management plan/fuel modification plan with comprehensive strategies to reduce fire potential during construction and over long-term operation. Therefore, potential impacts due to exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be less than significant.

Cumulative Impact Analysis

The Chino Basin is largely urbanized with residential, commercial, and industrial development. As the area continues to develop, the addition of more development could exacerbate fire risk or may result in temporary or ongoing impacts to the environment resulting in a significant cumulative impact. Since the proposed CBP infrastructure would primarily be constructed within urban areas or outside of very high FHSZs in LRAs or, if an CBP infrastructure project must be located within a severe wildfire hazard area, MM **WF-2** would be implemented. As such, while exposure of people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes may be exacerbated by cumulative development in within very high FHSZs, with the implementation of MM **WF-2**, the proposed project would not result in a cumulatively considerable contribution to cumulative impacts from such occurrences.

*Cumulative Measures: Implementation of MM **WF-2** may be required*

Level of Significance After Mitigation: Less Than Significant

The implementation of MM **WF-2** would ensure that the proposed facilities' contribution to cumulative wildfire hazard impacts would not be cumulatively considerable by requiring the preparation and implementation of a project specific fire hazard mitigation plan with comprehensive strategies to reduce/control exposing people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. IEUA would review and approve such fire management plans with an opportunity for review and comment by CAL FIRE to ensure their implementation during construction and operation on the proposed project.

4.21.6 Cumulative Impacts

Level of Significance: Less Than Significant

The cumulative analysis off each Wildfire issue evaluated in this Subchapter (4.21) of the DPEIR determined that the proposed project would not make a cumulatively considerable contribution to cumulative wildfire hazards for two primary reasons: 1) most, if not all, of the CBP infrastructure are proposed to be located within urban areas or outside of very high FHSZs in LRAs or, 2) if a facility must be located within a severe wildfire hazard area, MMs **WF-1** and **WF-2** would be implemented. As such, while overall wildfire risk may be exacerbated by cumulative development within very high FHSZs, with the implementation of MMs **WF-1** and **WF-2**, the proposed project would not result in a cumulatively considerable contribution to wildfire impacts from such occurrences.

4.21.7 Unavoidable Adverse Impacts

As determined in the preceding evaluation, with the implementation of mitigation, the proposed project would have no potential to result in any significant and unavoidable impacts as a result of wildfire threats or hazards in the Chino Basin.

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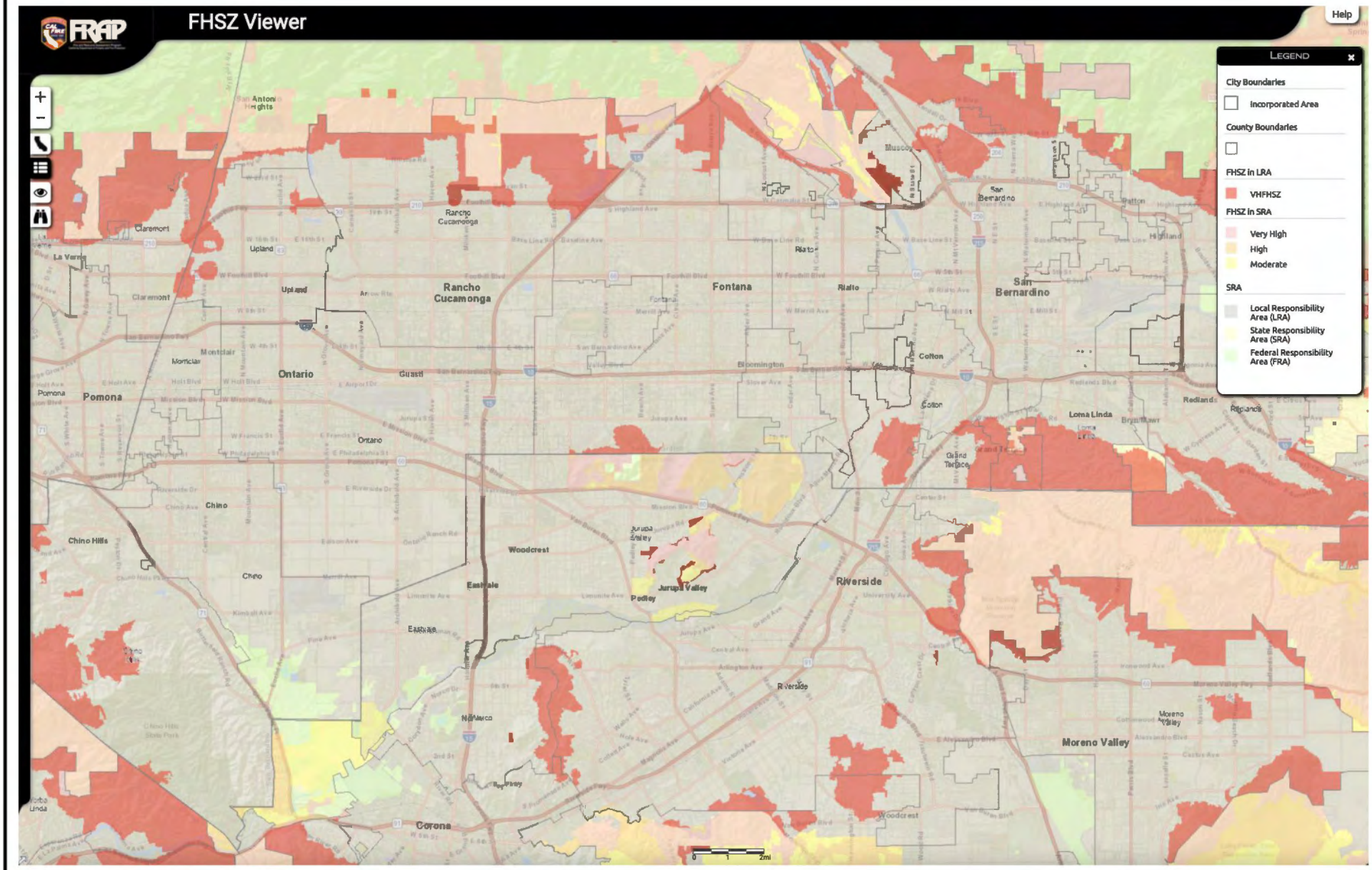

FIGURE 4.21-1

Tom Dodson & Associates
Environmental Consultants

Fire Hazard Severity Zone in the SRA and LRA

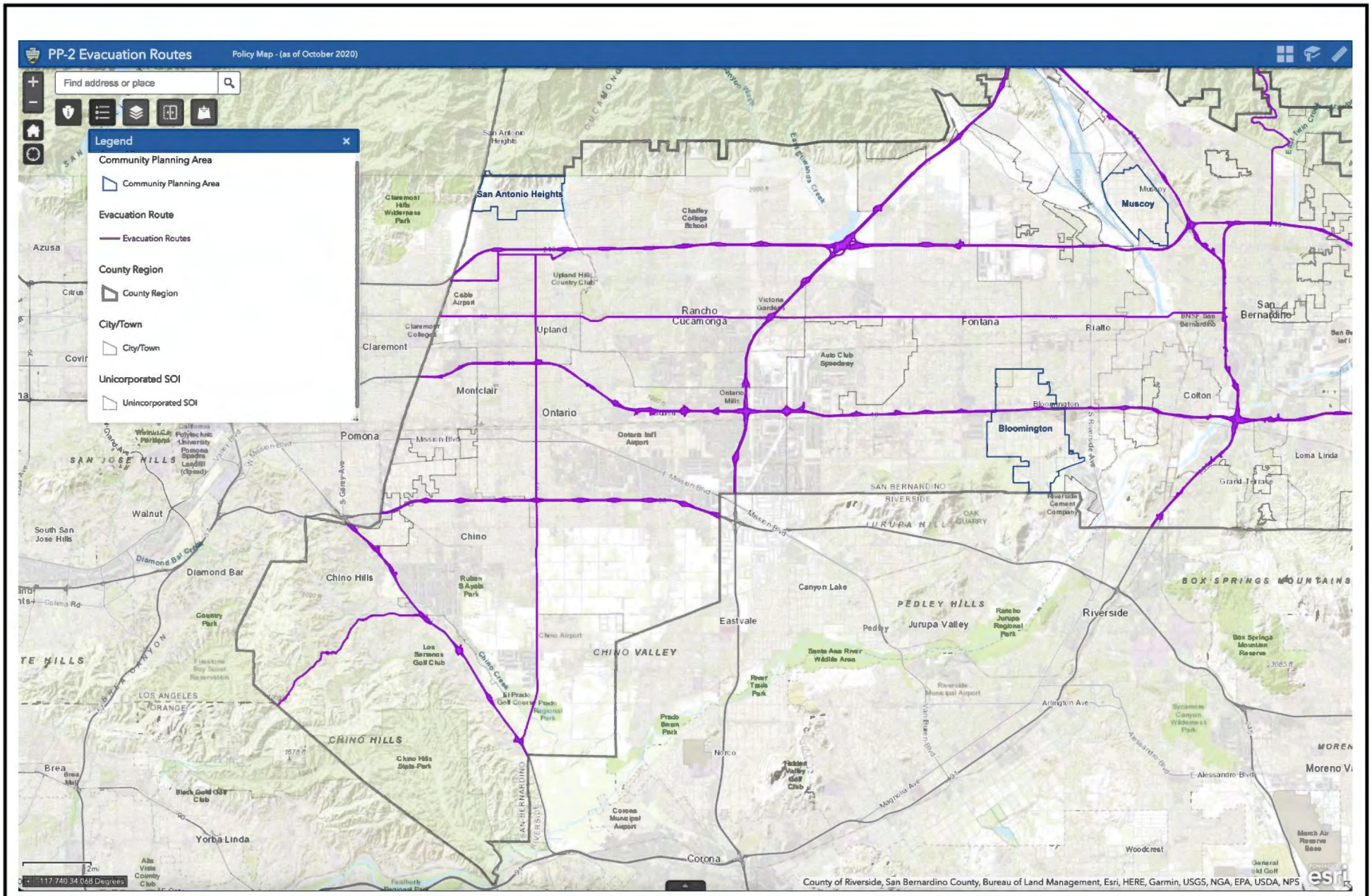

FIGURE 4.21-2

Tom Dodson & Associates
Environmental Consultants

Countywide Evacuation Routes Map

CHAPTER 5 – ALTERNATIVES

5.1 INTRODUCTION

CEQA and the CEQA Guidelines require an evaluation of alternatives to the proposed Chino Basin Program (CBP) to be included in this DPEIR. The CBP has been evaluated for potential significant adverse impacts in Chapter 4, above. This chapter of the EIR describes and evaluates project alternatives to the CBP and is intended to implement the requirements set forth in the CEQA Guidelines. This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines Section 15126.6(e)(2).

No comments were received at the scoping meeting held for the proposed CBP. Two comment letters specific to this DPEIR's alternatives analysis were received during the Notice of Preparation Comment Period. These are:

Comment Letter #5 from the City of Ontario (dated 10/14/21) states:

- *The City of Ontario proposes there be an alternative defined as the Local Control and Supply Alternative that evaluates treating and injecting, what they believe to be, currently underutilized recycled water in the Chino Groundwater Basin for local use with no export or in-lieu elements, to include the following components:*
  - *Make beneficial use of recycled water currently being discharged to the Santa Ana River.*
  - *Develop a local supply by advance treated recycled water which would be available to agencies in any given year, enabling agencies to reduce reliance on imported water.*
  - *Provide purified water pumping and conveyance for groundwater injection (injection wells and/or recharge basins).*
  - *Implement and be consistent with the rights of contracting parties pursuant to the Regional Sewage Contract.*
  - *This alternative would not include the following components:*
    - *Groundwater extraction and treatment*
    - *Potable water pumping and conveyance*
    - *Potable water usage (MWD pump-back or in-lieu)*
  - *This alternative would only include PUT components with participating agencies extracting the advanced water from the basin using existing infrastructure.*

Comment Letter #6 from the California Department of Fish and Wildlife (CDFW) (dated 10/14/21) states:

- *CDFW recommends that the EIR address a reasonable range of alternatives, including the no project alternative, which should address climate change and drought that may affect the community.*

Responses to these comments can be found in Subsection 2.2.1 of the Introduction (Chapter 2) of this DPEIR. Additionally, most responses point to text that can be found in this Chapter.

5.1.1 Rationale for Alternatives Selection

The purpose of the alternatives evaluation under CEQA is to determine whether one or more feasible alternatives are capable of reducing the potentially significant impacts of the proposed project to a less than significant level. As Section 15126.6 of the CEQA Guidelines states:

Section 15126.6(a): *Alternatives to the Proposed Project. An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives which are infeasible. …*

Section 15126.6(b) *Purpose. Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.*

CEQA Guidelines Section 15126.6(f) states that the process of screening alternatives to evaluate in an EIR, is guided by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice, and further specifies that an EIR need examine in detail only those alternatives that the lead agency determines could feasibly attain most of the basis objectives of the proposed project. (CEQA Guidelines § 15126.6(f).) Among the factors that may be taken into account when addressing the feasibility of alternatives are environmental impacts, site suitability, economic viability, availability of infrastructure, regulatory limitations, jurisdictional boundaries and whether the applicant could reasonably acquire, control, or otherwise have access to the alternative option. (CEQA Guidelines § 15126.6(f)(1).) An EIR need not consider an alternative whose effects cannot be reasonably identified, whose implementation is remote or speculative, or one that would not achieve most of the proposed project's objectives. (CEQA Guidelines § 15126.6(f)(3).)

Guided by the foregoing, IEUA has undertaken a two-step process to identify the range of alternatives to discuss in this DPEIR. First, IEUA reviewed a broad range of potential alternatives and excluded those that were not at least "potentially feasible" as far as achieving most of the proposed project's basic objectives. Those alternatives are discussed below in Subsection 5.2. Second, IEUA has included in this DPEIR, for detailed evaluation and comprehensive comparison with the CBP, the remaining alternatives that IEUA deems to be at least "potentially feasible" alternatives in order to foster meaningful public participation and informed decision making.

Additionally, a No Project Alternative is also required to be included in the range of alternatives. (CEQA Guidelines § 15126.6(e)(1).) "If the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives". (CEQA Guidelines § 15126.6(e)(2).) As explained below, the mandatory No Project Alternative is not environmentally superior to the proposed CBP.

Based on the analysis in Chapter 4 of the DPEIR, implementation of the CBP may result in potentially significant impacts in the areas of Biological Resources, Greenhouse Gas, and Utilities and Service Systems that may not be able to be mitigated to a level of insignificance.

Implementation of feasible mitigation measures or project design features would reduce potentially significant impacts to the following to less than significant: Aesthetics, Agriculture and Forestry Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Noise, Population and Housing, Public Services, Recreation, Transportation, Tribal Cultural Resources, and Wildfire. No

other potential significant adverse environmental impacts are forecast to result from the CBP's implementation after implementation of the recommended mitigation measures.

As described in Chapter 1.0, the CBP's goals are as follows:

- **Meet Permit Compliance for the Continued Use of Recycled Water in the Chino Groundwater Basin:** The CBP provides groundwater recharge facilities to recharge high quality recycled water, thus reducing TDS levels within the Chino Groundwater Basin.
- **Maintain Commitments for Salt Management to Enable Sustainable Use of Recycled Water in the Basin:** With the implementation of AWPF with an expected effluent concentration of 100 mg/L, the recycled water TDS will be significantly reduced.
- **Develop Infrastructure That Addresses Long Term Supply Vulnerabilities:** The CBP would improve the use of recycled water at a regional level through new regional pipelines enabling greater potential access to recycled water and enhances local groundwater supplies through the installation of additional extraction wells and through the installation of new wellhead treatment systems that would bring existing out-of-service wells online.
- **Provide a Source of Water for Emergency Response:** The CBP results in 15,000 AFY in local supplies which can be used to augment the water supply portfolio during unplanned or catastrophic events.
- **Develop an Integrated Solution to Produce State and Federal Environmental Benefits:** The CBP develops a highly reliable new water supply formally dedicated to environmental benefit that can be deployed dynamically and managed flexibly to address varying and changing ecological needs.

Implementation of the facilities proposed as part of the CBP consists of construction and operation of the various facilities that will be summarized below. These potential facilities are separated into four project categories: (1) Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.); (2) Project Category 2: Conveyance Facilities and Ancillary Facilities; (3) Project Category 3: Groundwater Storage Increase; and (4) AWPF and Other Water Treatment Facilities. Below are general descriptions of the facilities and operations proposed as part of the CBP.

Project Category 1: Well Development (Injection Wells, Extraction Wells, Etc.)
This Project Category includes the development of 16 injection, 17 extraction, and 4 monitoring wells, as well as use of up to existing member agency wells. The proposed new wells are anticipated to be installed in the northern middle portion of the Chino Basin, generally in the area in which the boundaries of the cities of Ontario, Fontana, and Rancho Cucamonga meet (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Project Category 2: Conveyance Facilities and Ancillary Facilities
This Project Category includes the construction of 158,400 LF of new pipelines, installation of 4 pump stations, one 5 MG reservoir, and up to 6 turn outs varying between 12" and 72" in size. The proposed conveyance facilities and ancillary facilities would be implemented throughout the entire Chino Basin with a focus toward the middle, northern, and eastern portions of the Basin (refer to Exhibit 8 in the Project Description, and Figures 6 through 9).

Project Category 3: Groundwater Storage Increase
This Project Category contemplates an expansion of the maximum storage space (safe storage capacity) to be used within the Chino Basin from its current maximum (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035) to up to 700,000 AF

through June 30, 2039, and to 580,000 from July 1, 2039 through June 30, 2048, with the Safe Storage Capacity decreasing to 500,000 AF thereafter.

Project Category 4: AWPF and Other Water Treatment Facilities
This Project Category contemplates the AWPF at RP-4, which would be constructed to utilize an MF/RO/UV-AOP treatment train and would ultimately have a capacity of 15,000 AFY, and the installation of up to 3 wellhead treatment facilities.

As shown in the preceding discussion, the CBP consists of a complex, complicated and integrated program that incorporates a mix of projects and operations that are designed to meet the primary objectives of the CBP.

The potentially feasible alternatives to the CBP are evaluated in Sections 5.3, 5.4, and 5.5, and include: the No Project Alternative; Alternative 1 – the Baseline Compliance Plan Alternative; and Alternative 2 – the Regional Water Quality and Reliability Plan Alternative.

5.2 ALTERNATIVES CONSIDERED BUT REJECTED

5.2.1 Alternate AWPF Location

The potential AWPF locations impact treatment process selection and infrastructure requirements for tertiary recycled water, purified water, and brine conveyance. The closer that the AWPFs can be sited to source water supply (tertiary recycled water), the groundwater recharge locations, and brine disposal will result in lower capital and operating costs. RP-1 and RP-4 were initially considered as the two most-feasible locations for the future AWPF, as was a smaller AWPF at Monte Vista Water District (MVWD) Plant 28. AWPF's at RP-1 and MVWD Plant 28 were considered, but ultimately rejected for the following reasons:

- The AWPF at RP-1 would result in:
    - Slightly higher AWPF costs at due to early integration of Membrane Bio Reactor (MBR) with the AWPF (MBR has a higher unit cost than membrane filtration [MF]).
    - Higher purified water conveyance costs for PUT-1 through PUT-3 for both pipelines and the pump station because RP-1 is farther away from the injection wells than RP-4.
    - Higher annual operation and maintenance (O&M) costs due to increased pumping costs from RP-1 to the injection wells.
- The AWPF at MVWD Plant 28 would:
    - Not meet IEUA selection criteria "Objective 3 – Streamline operations and maintenance" because these alternatives are more operationally complex as they require two AWPFs to accomplish the operation of the CBP generating 15,000 AFY of advanced purified water
    - Not meet IEUA selection criteria "Objective 4 – Minimize program complexity" because this alternative is institutionally complex with an AWPF located on MVWD's property, as it would require more complex implementation due to two AWPFs and two purified water conveyance systems, and would require land acquisition to replace the MVWD Plant 28 site for MVWD.

In addition to the above alternative locations, an AWPF at IEUA's RP-5 was initially considered because of the impending expansion project at RP-5, which includes conversion to an MBR treatment system which could be advantageous for planning a downstream AWPF, pending regulatory development and approval. An AWPF at RP-5 would address only the recycled water

effluent NPDES permit limits; it would not address the use of recycled water within the basin and the groundwater recharge regulations compliance. Also, since RP-5 is situated hydraulically low in the IEUA recycled water distribution system, the use of its advanced purified water would be limited to discharge of unused recycled water as effluent to the Chino Creek/Santa Ana River and would not provide the same operational flexibility and benefits of locating in the northern service. An AWPF at RP-5 would be located in the far southern end of the service area, significant piping and pumping infrastructure would be needed to get this high-quality water to ideal recharge locations in the northern service area. Further, the Chino Basin Watermaster's 2018 Storage Framework Investigation (SFI) prioritized recharge ("PUTS") to occur in the north eastern portion of the Chino Basin (Management Zone 2) to minimize pumping sustainability challenges, minimize impacts of storage and recovery, preserve the current state of hydraulic control, and to take advantage of the groundwater storage capabilities in Management Zone 2.

As a result, RP-5 was eliminated from further consideration as RP-4 has been selected as the preferred option for modification to include advanced water purification as part of the CBP because of its advantages relative to operational flexibility and compatible future expansion plans. RP-4 was selected to be the preferred AWPF location over RP-1 due to its proximity to the proposed injection well field, its greater capacity to pump to future injection wells, space availability within the site, ability to integrate with future direct potable reuse opportunities and proximity of surface water treatment plants, its consistency with the SFI recharge prioritization, and overall operational flexibility. As such, AWPF options at RP-1, RP-5, and MVWD's Plant 28 were considered, but ultimately rejected from further analysis in this DPEIR.

5.2.2 Alternate Delivery Method (Pre-Delivery)

Initially, TAKE options that would include pre-delivery were considered. Pumping groundwater during non-call years was also considered to reduce the required size and capacity of the TAKE facilities. For pre-delivery, it was assumed that 10,000 AFY would be delivered to Metropolitan Water District of Southern California (MWD) and/or member agencies during the 17.5 non-call years, and 26,700 AFY would be delivered to MWD and/or member agencies during the 7.5 call years, totaling 375,000 AF for the 25-year project life. For alternatives with pre-delivery, the capacity of the TAKE facilities was reduced from 50,000 AFY to 26,700 AFY. With pre-delivery, the water would be stored in MWD's system during non-call years for use during call years. Therefore, alternatives with pre-delivery include a wheeling charge from MWD to compensate for storage.

Due to operational and economic considerations and upon further evaluation and discussions with MWD, pre-delivery was later determined to be infeasible. Those TAKE alternatives developed during the evaluation that considered pre-delivery are no longer being considered for the CBP, and as such, this alternative was considered, but has since been rejected.

5.2.3 Use of Recharge Basins for Groundwater Recharge

Existing recharge basins are used to recharge a combination of stormwater, tertiary recycled water, and imported water into the basin. These recharge basins are highly utilized, especially seasonally during storm events, and do not have sufficient year-round capacity for the additional purified water (15,000 AFY) to be recharged as part of the CBP. Furthermore, the development of new recharge basins would require a great amount of acreage, which may be difficult to secure and develop in order to be operational as part of CBP in 2028. Therefore, the use of recharge basins as part of CBP operations was considered, but ultimately rejected as infeasible due to the

(a) high development costs relative to injection wells, (b) large amount of space required to develop new recharge basins, and (c) lack of existing capacity for recharge at existing basins.

5.3 NO PROJECT ALTERNATIVE

One of the alternatives that must be evaluated in an EIR is the "no project alternative," regardless of whether it is a feasible alternative to the proposed project, i.e., would meet any, some, or all of the project's objectives or requirements. In this case, this Subsection evaluates a No Project Alternative that reflects a "no action" alternative that makes salient the potential impacts and practical results redounding from IEUA not approving the CBP and taking no actions to resolve regulatory compliance issues within the Basin from continued recycled water use.

Under this alternative, the environmental impacts that would occur if the CBP facilities and programs are not implemented are evaluated. Under this No Project Alternative, there would be no expansion of existing recycled water systems or groundwater by member agencies of IEUA. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand.

Analysis performed to date indicates that IEUA could exceed the NPDES TDS permit limits for recycled water within the next 10 years, and possibly the groundwater recharge permit limit in the near future if no actions are taken. Maintaining permit compliance is critical for IEUA. There are strict consequences associated with non-compliance with the maximum benefit commitments (i.e., failure to develop the required mitigation plans when the action limits are triggered) that could lead to recycled water and groundwater recharge program interruption and/or retroactive activities. If the NPDES permit limit is exceeded, IEUA will be in violation of its NPDES permit and if a plan to address it is not submitted to the Santa Ana Regional Water Quality Control Board (RWQCB) in a timely manner, this could result in the halting of all use of recycled water. Consequently, all effluent from IEUA's water recycling facilities will need to be discharged to the Santa Ana River. Discharge to the Santa Ana River above 550 mg/L will also be above the discharge limitation, which is also 550 mg/L. The Basin Plan also states that "The Regional Board will also require mitigation of any adverse effects on water quality downstream of the Chino Basin that result from failure to implement the 'maximum benefit' commitments." Non-compliance could result in permit modification with more stringent recycled water and groundwater recharge limits, severely impacting both the operability of the programs as well as the costs.

Unmitigated use and recharge of recycled water in the Chino Basin is contingent upon compliance with the maximum benefit objectives established by the RWQCB and agreed to by IEUA. If compliance is not demonstrated, lower, more stringent limits consistent with the State and federal anti-degradation objectives would apply. These lower limits effectively prohibit use of recycled water at worst or require a combination of purchase of dedicated State Water Project (SWP) supplies with low TDS from MWD and treatment to reduce TDS concentrations at best. TDS management within Chino Basin is thus critical to ensure continued use of recycled water and reduce reliance on imported water within IEUA's service area.

During 2019, recycled water used for groundwater recharge exceeded the 1,2,3-Trichloropropane (1,2,3-TCP) maximum contaminant level and perfluorooctanoic acid (PFOA) Notification Level and went into an accelerated monitoring schedule for 16 consecutive weeks. Corrective action reports were submitted to the State Water Resources Control Board's Division of Drinking Water and RWQCB in February 2020. Source evaluation for both compounds is ongoing.

Advanced treatment may be required to address impending/future regulations for 1,2,3-TCP and perfluorooctanoic acid PFOA. There are other contaminants of emerging concern, such as microplastics, that are likely to emerge over the next 10 years and could also require advanced treatment to continue recharge of recycled water. Even if these facilities are not required to maintain compliance with the Basin Plan, they may be needed to treat recycled water to continue current and for future groundwater recharge.

There is little flexibility to respond and manage changes in TDS concentration due to drought conditions, and the timeframe by which drought conditions can impact recycled water TDS concentration is short. Expected recycled water TDS concentration is 500 mg/L, considering contributions from household use and treatment processes and imported water. In periods of drought, recycled water TDS concentration is susceptible to increases, with imported water TDS concentration reaching up to 400 mg/L, and the desalter operating at 350 mg/L. Although statistical models considered long-term trends based on data sets of 20+ years and historical drought patterns, significant potential drivers, such as climate change, are not evaluated in these projections. These potential drivers further support the need for salinity management within the next 10 years.

If the ambient water quality in the Chino Basin is not maintained per the RWQCB's TDS limit, there will be greater dependence on imported water and local stormwater supplies, which are highly volatile and impacted by climate change. Since the Basin only receives imported water from one regional pipeline that is owned and operated by MWD, an unplanned or catastrophic occurrence could cut off 25 percent of the Basin's water supply. The No Project Alternative's no action approach would result in the Basin being out of regulatory compliance, threaten water supply, and does not meet IEUA's objectives.

As such, and as required by CEQA, a second, reduced development, alternative that also meets the requirements of analyzing a "no project" alternative is provided below as the Baseline Compliance Plan Alternative. The reason for distinguishing these two alternatives is that for IEUA to take "no action" towards maintaining regulatory compliance means that at some point it will be out of compliance and ultimately, in order for IEUA to continue its operations, an advanced water purification facility would be required in order to comply with its RWQCB permits. As such, the following alternatives discussion reflects the environmental consequences of a true "no action" alternative—henceforth called the No Project Alternative or NPA—while the Baseline Compliance Plan Alternative or BCPA, identified below as Alternative 1, would meet the provisions of CEQA Guidelines Section 15126.6(e)(3)(A) and (B), which requires the "no project" alternative to proceed as applicable to a given project as follows:

(A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically, this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.

(B) … However, where the failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval… ."

As such, given that it is reasonably foreseeable that without implementation of the CBP, actions will need to be taken to ensure that IEUA remain in regulatory compliance through their continued

operations, the Baseline Compliance Plan Alternative (Alternative 1), is provided below in Subsection 5.4 to address this requirement.

The following evaluation will also include identification of an environmentally superior alternative as required by Section 15126.6(e)(2) of the CEQA Guidelines. A summary comparative discussion of the no project alternative in terms of the specific issues evaluated in this DPEIR is provided below.

Aesthetics: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to impact a scenic vista; substantially damage scenic resources; conflict with applicable zoning and other regulations governing scenic quality; or create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area. Contrastingly, under the CBP, aesthetic impacts to scenic vistas and resources from disturbance would be potentially significant, but can be reduced to less than significant by shielding facilities and landscaping or revegetating disturbed areas either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in the area, as specified in mitigation measures (MMs) **AES-1** and **AES-2**. Additionally, under the CBP implementation of MM **AES-3** is required to ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a less than significant level, and MM **AES-4** is required to ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any aesthetic impacts. Under this evaluation and set of assumptions, the CBP would result in less overall operational aesthetic impacts; however, the level of significance of aesthetic impacts to scenic vistas and scenic resources from this alternative would be similar to that which would occur under the proposed CBP, as neither would result in any significant and unavoidable impacts.

Agricultural and Forestry Resources: The NPA would not result in any new facilities as proposed to operate the CBP. While the CBP would have a potential to impact agricultural and forestry resources located within Chino Basin, mitigation is available to minimize impacts under this issue to a level of less than significant. It is worth noting that the provision of water is valuable to most uses within the Basin, including agricultural operations, and under the NPA, as stated above, the Chino Basin may be out of regulatory compliance, and the water supply may be threatened. As such, the NPA has a marginal potential to result in indirect impacts to agricultural resources, as the water supply required to operate existing and future facilities within land designated for such uses may be at risk due to the availability of water given a more limited water supply. Regardless, the NPA would have no potential to result in the loss of Prime Farmland or Farmland of Statewide Importance, though the NPA may have a potentially significant potential to involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use. The NPA would have no potential to impact forestry resources, as no land that has been designated for such use exists within the Chino Basin, and furthermore, where the CBP would have a potential to result in a loss of riparian woodland areas along the Santa Ana River, Chino Creek, and Mill Creek, and in the Prado Basin, these resources, unlike agricultural resources, do not require delivery of groundwater to sustain them. Thus, the NPA would have no potential to impact forestry resources, and the CBP would require mitigation to

minimize impacts to such resources. Under this evaluation and set of assumptions, the CBP would result in and the NPA would result in similar levels of impact to agricultural and forestry resources; neither the NPA nor the CBP would result in any significant and unavoidable impacts.

Air Quality: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have minimal potential to result in significant air quality impacts. As with the CBP, this alternative would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP). Because no expansion of existing recycled water systems or groundwater by member agencies of IEUA would occur under the NPA, it is unlikely that maximum daily emissions during construction and operation of the NPA would exceed SCAQMD regional or localized significance thresholds, whereas construction activities under the CBP were determined to exceed the SCAQMD regional significance threshold for nitrogen oxide emissions, and as such MM **AQ-1** would be required to minimize potentially significant impacts below significance thresholds (see Chapter 4.3, *Air Quality*). The NPA also would not include new facilities with the potential to generate substantial odorous emissions. As such, under this evaluation and set of assumptions, the NPA would have substantially less potential to result in significant air quality impacts; however, the level of significance of air quality impacts of this alternative would be similar, if less than, that which would occur under the proposed CBP and would be less than significant.

Biological Resources: The NPA will have no general biological resource impacts as it would not require any diversions from the Santa Ana River. The elimination of diversions from the Santa Ana River has the potential to eliminate the potentially significant impacts to the Santa Ana Sucker. When mitigation is implemented—primarily avoidance of biologically sensitive areas or compensation to offset losses to sensitive biological resources—the proposed CBP approaches the level of significance regarding biological resource to those that would result from the NPA's impacts, but a potential still exists for significant impacts under the CBP as a result of the diversion of recycled water from the Santa Ana River thus impacting the Santa Ana Sucker as the available mitigation to protect this species cannot be guaranteed to minimize impacts below significance thresholds. Under the NPA, no facilities would be installed that could impact site specific biological resources, and recycled water discharge would continue from IEUA as it does at present, thus eliminating the potential for impacting species or habitat supported by the Santa Ana River. As such, under this evaluation and set of assumptions, the CBP's effects on biological resources is considered to be greater than the NPA, and the NPA would avoid a significant impact on biological resources that would otherwise result from implementation of the CBP.

It should be noted, however, that the NPA would eliminate the potential environmental benefit that would result from the CBP. As discussed in Chapter 3 of this DPEIR, the CBP would provide environmental benefit in call years, which will likely be in dry seasons, to improve habitat conditions enabling salmonid species greater chance for survival. The NPA would not only forgo this environmental benefit, but it would also result in a threat to the reliability of water supply in the Chino Basin. Given this, the NPA is not considered environmentally superior to the CBP in the area of biological resources.

Cultural Resources: Simply because the CBP will disturb a greater amount of area, its potential for encountering cultural resources is greater for the NPA. The NPA does not require development of any kind, other than the business as usual approach by which IEUA manages its operations. As such, the NPA would have no cultural resources impacts. When mitigation is implemented—primarily avoidance of culturally sensitive areas, further site-specific study of large scale CBP projects, and specific treatment requirements for buried cultural materials that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to cultural resources. Under this evaluation and set of assumptions the NPA would have less impacts on cultural resources to the proposed CBP, but neither the NPA nor the CBP would result in significant cultural resource impacts.

Energy: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have minimal potential to result in significant energy impacts. Because no expansion of existing recycled water systems or groundwater by member agencies of IEUA would occur, including the addition of an AWPF in conjunction with PUT and TAKE facilities as proposed by the CBP, energy consumption under the NPA would be less than that which would occur under the proposed CBP. However, as with the proposed CBP, the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities would be minimized by compliance with existing applicable regulations. Furthermore, operational energy usage under the NPA would not be wasteful, inefficient, or unnecessary because it would contribute to the provision of wastewater collection and recycled water generation within IEUA's service area and would be conducted in accordance with existing applicable regulations related to energy efficiency and vehicle fuel economy. Furthermore, similar to the proposed CBP, IEUA would continue to procure energy to serve new facilities under the NPA from Southern California Edison (SCE), which has historically achieved the Renewables Portfolio Standard, and would continue to implement projects in accordance with the goals and objectives of its CCAP. Therefore, this alternative would also be consistent with the California Air Resources Board's (CARB) 2017 Climate Change Scoping Plan and the IEUA CCAP. As such, under this evaluation and set of assumptions, the NPA would result in less overall energy consumption; however, the level of significance of the energy impacts of this alternative would be similar to that which would occur under the proposed CBP and would be less than significant.

Geology and Soils: The Chino Basin contains substantial geological and soils constraints. Due to these substantial constraints and the installation of future CBP related facilities in locations where such constraints may occur, a potential for significant geology and soils resources impacts from implementation of the CBP were identified in Subchapter 4.8. The NPA does not require development of any kind, other than the business as usual approach by which IEUA manages its operations. As such, the NPA would not result in exposure of persons or structures to new sources of geology and soils related constraints including seismic constructions such as, liquefaction, groundshaking, landslide, and ground rupture as well as soil constraints such as erosion, subsidence, and soil stability. Several mitigation measures were identified to minimize geology and soils impacts under the CBP, while the NPA would not require mitigation to ensure that geology and soils impacts are less than significant. As such, under this evaluation and set of assumptions, the NPA would have less potential to result in significant geology and soils impacts compared to the CBP; however, the level of significance of geology and soils impacts of this

alternative would be similar, if less than, that which would occur under the proposed CBP since both would be less than significant with the implementation of mitigation.

Greenhouse Gas: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have minimal potential to result in significant greenhouse impacts. Because no expansion of existing recycled water systems or groundwater by member agencies of IEUA would occur, including the addition of an AWPF in conjunction with PUT and TAKE facilities as proposed by the CBP, greenhouse gas (GHG) emissions under the NPA would likely be less than those of the proposed CBP. Given that the NPA represents an alternative with no new construction or operational activities outside of the scope of a business as usual scenario (i.e., continuation of practices that have already been evaluated and approved under CEQA or that fall outside of the scope of CEQA), the NPA would have no potential to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. As such, under this evaluation and set of assumptions, the NPA would result in fewer overall construction and operational GHG emissions compared to the proposed CBP. Under this evaluation and set of assumptions the proposed CBP would result in significant and unavoidable Greenhouse Gas impacts, while the NPA would not result in any significant impacts thereof. As such, the NPA would avoid a significant impact on biological resources that would otherwise result from implementation of the CBP.

Hazards and Hazardous Materials: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and its member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have minimal potential to result in significant hazards and hazardous materials impacts. The NPA would operate in accordance with existing IEUA policies related to the handling of hazardous materials and, as with the CBP, would be subject to mandatory regulations pertaining to the handling and transport of hazardous materials. Given that no new facilities would be developed under the NPA, no mitigation would be required to minimize potential hazards and hazardous materials impacts. Several mitigation measures were identified to minimize hazards and hazardous materials impacts under the CBP. Therefore, though there will be some adverse impacts as a result of implementing the CBP, specific mitigation measures would reduce its potential project specific and cumulative (direct and indirect) effects to a less than significant impact level for hazards and hazardous material issues. As such, under this evaluation and set of assumptions, the NPA would likely have less potential to result in significant hazard and hazardous materials impacts; however, the level of significance of the hazard and hazardous materials impacts that would result from this alternative would be similar, if less than, that which would occur under the proposed CBP since both would be less than significant with the implementation of mitigation.

Hydrology and Water Quality: It is under this environmental issue where the CBP Alternative and the NPA diverge in their potential environmental impacts. Under the CBP, the expansion of the

safe storage capacity required to implement the proposed program may presents several potential challenges that may result in significant impacts, including potential new pumping sustainability challenges, reduced net recharge, subsidence, and potential management of maintaining hydraulic control of the Chino Basin. Under the NPA, however, there are other challenges with managing the basin, including significant water quality challenges that were outlined under the description of this alternative. The consequences of taking no action towards addressing regulatory compliance challenges that would be addressed by the CBP or by the other alternatives—Alternatives 1 and 2—would be as follows: if the ambient water quality in the Basin is not maintained per the RWQCB's TDS limit, there will be greater dependence on imported water and local stormwater supplies, which are highly volatile and impacted by climate change; an unplanned or catastrophic occurrence could cut off 25 percent of the Basin's water supply where imported water is being relied upon with limited expansion of local water supply sources; and as such, a "no action" approach results in the Basin being out of regulatory compliance. Consequently, going forward with management of the Basin in a business as usual approach, without addressing the need for new facilities needed to tackle the above challenges, would have a potential to result in a major significant impact to the Basin's hydrology resources and water quality characteristics.

Regarding flood hazards and contribution thereof, the NPA, with no proposed facilities, would have no potential flood hazard impacts beyond those that have been identified to occur at existing facilities by previously adopted or certified CEQA documentation. Regardless, both of these alternatives are forecast to have less than significant adverse impact under this environmental topic.

In the final analysis, the NPA cannot be considered the environmentally superior alternative to the CBP for the hydrology and water quality issue because the NPA, which assumes no facilities would be installed and business as usual would continue, would result in significant degradation in water quality with no mitigation available to minimize this significant impact. Refer to the Baseline Compliance Plan Alternative below, which represents a business as usual approach that would mitigation for continued water quality degradation in the Chino Basin and thus prevent a significant impact thereof from occurring. Ultimately, under this evaluation and set of assumptions the CBP's effects on hydrology and water quality are considered to be less than the NPA, as the CBP would mitigation significant impacts under this issue to a level of less than significant. The NPA would ultimately lead to significant new impacts under hydrology and water quality that would not otherwise result from implementation of the CBP.

Land Use and Planning: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to conflict with the goals and policies of the applicable General Plans or physically divide an established community. Mitigation is required to reduce impacts to a level of less than significant under the CBP, and these measures would ensure that the facilities associated with the CBP are developed in appropriate areas and conform with the surrounding land uses or are developed to minimize conflicts with adjacent land uses. As such, while the CBP would require mitigation to reduce potential impacts to a level of less than significant, the NPA would not result in any land use and planning impacts. Under this evaluation and set of assumptions, the NPA would result in less overall land use impacts; however, the level of significance would be similar,

if less than, that which would occur under the proposed CBP and neither the NPA nor the CBP would result in significant land use and planning impacts.

Mineral Resources: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to result in a direct adverse impact on mineral resources, or result in the loss of availability of a known valuable mineral resource or result in the loss of availability of a locally important mineral resource recovery site. As such, while implementation of mitigation measures to avoid siting facilities within areas designated for mineral resources is required to minimize impacts under the CBP, given that no facilities would be developed under the NPA, no mitigation would be required to reduce its potential for impacts to mineral resources to a less than significant level. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any mineral resource impacts. Under this evaluation and set of assumptions, the NPA would result in less overall impacts to mineral resources; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP and neither the NPA nor the CBP would result in significant mineral resource impacts.

Noise: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have minimal potential to result in significant noise impacts. Because no expansion of existing recycled water systems or groundwater by member agencies of IEUA would occur, including the addition of an AWPF in conjunction with PUT and TAKE facilities as proposed by the CBP, continuation of the business as usual approach would have no potential generate temporary or permanent increases in ambient noise levels and excessive groundborne vibration levels in excess of the applicable thresholds. Therefore, while the proposed CBP would result in noise and vibration impacts that could be potentially significant, mitigation would reduce this impact to a level of less than significant. In contrast, the NPA would not require mitigation to reduce noise impacts below significance thresholds, as the continued operations at IEUA facilities and service systems would continue to apply with existing noise standards and regulations as they do at present. Under this evaluation and set of assumptions, the NPA would result in less overall noise impacts; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP and neither the NPA nor the CBP would result in significant mineral resource impacts.

Population and Housing: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under

the NPA, the NPA would not include construction of new homes or businesses and would therefore not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area. Furthermore, the NPA would not result in displacement of housing or persons because no specific facilities are proposed to support IEUA under this alternative. While the CBP would require mitigation to minimize the impacts from construction of facilities that would impact housing through a requirement that relocation assistance in compliance with the California Relocation Assistance Act must be supplied to displaced persons. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any population and housing impacts. Under this evaluation and set of assumptions, the NPA would result in less overall impacts related to population and housing; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP since neither the NPA nor the CBP would result in significant population and housing impacts.

Public Services: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, schools, fire protection facilities, parks, or other public services, or the need for new or physically altered police protection facilities, schools, fire protection facilities, parks, or other public services, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives. Mitigation is required to reduce impacts to a level of less than significant under the CBP, these measures would minimize the potential for trespass that could exacerbate demand for police protection services; and, minimize the potential for loss of park or recreational facilities as a result of CBP projects through relocation or provision of supplemental parkland or recreation facilities. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any public services impacts. Under this evaluation and set of assumptions, the NPA would result in less overall public service impacts; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP since neither the NPA nor the CBP would result in significant public services impacts.

Recreation: The NPA would not result in any new facilities that have been proposed to operate the under CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Mitigation is required to ensure that, should construction of recreation or park facilities be required as a part of the CBP, a subsequent CEQA determination will be prepared to ensure that impacts are appropriately assessed and mitigated. As such, while the CBP would require mitigation to reduce impacts to a level of less than

significant, the NPA would not result in any recreation impacts. Under this evaluation and set of assumptions, the NPA would result in less overall recreation impacts; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP since neither the NPA nor the CBP would result in significant recreation impacts.

Transportation: The NPA would not result in any new facilities that have been proposed to operate the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities; conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b); substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or result in inadequate emergency access. Mitigation is required to minimize impacts to transportation that would reduce the CBP's potential construction traffic impacts by requiring all construction activities to be conducted in accordance with an approved construction traffic management plan. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any transportation impacts. Under this evaluation and set of assumptions, the NPA would result in less overall transportation impacts; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP since neither the NPA nor the CBP would result in significant transportation impacts.

Tribal Cultural Resources: Simply because the CBP will disturb a greater amount of area, the potential for encountering Tribal Cultural Resources is greater under the CBP. The NPA does not require development of any kind, other than the business as usual approach by which IEUA manages its operations. As such, the NPA would have no tribal cultural resources impacts. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale projects, tribal and archaeological monitoring, and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to cultural resources. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the NPA would not result in any tribal cultural resource impacts. Under this evaluation and set of assumptions, the NPA would be less likely to cause impacts on tribal cultural resources than would the proposed CBP, but neither the NPA nor the CBP would result in significant tribal cultural resource impacts.

Utilities and Service Systems: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. Under the CBP, significant impacts to stormwater drainage, energy, natural gas telecommunications, or solid waste were determined to be less than significant with the implementation of mitigation, and under the NPA, specifically as it relates to utilities infrastructure, it is anticipated that no impact these utility systems would occur. Under the CBP mitigation is required to minimize impacts related to stormwater through

implementation of a drainage plan to reduce downstream flows for future CBP projects; this would be not required to implement the NPA, as IEUA would continue operating its existing facilities in the same manner as it would at present. The CBP would generate solid waste during operation and construction and mitigation is required to address potential impacts related to solid waste to a level of insignificance. In contrast, under the NPA, the IEUA would not cause any impacts to solid waste as it would be required to comply with mandatory regulations pertaining to solid waste, and would not generate any new sources of solid waste requiring additional analysis.

The construction of infrastructure related to energy and natural gas under the CBP was analyzed and determined to be less than significant with the implementation of mitigation that would ensure that CBP projects are not located in an area containing adjacent access to electricity and natural gas infrastructure, and if that is not possible, then subsequent CEQA documentation would be required. This mitigation would not be required to reduce impacts under the NPA, as existing facilities are currently served by adequate electricity and natural gas service systems. Under the CBP, the construction of infrastructure related to telecommunications was determined to be less than significant with the implementation of mitigation; this mitigation would not be required to reduce impacts under the NPA, as existing facilities are currently service by adequate telecommunication systems. As such, for the issues of solid waste and stormwater drainage, electricity, natural gas, and telecommunications, the CBP would require mitigation to minimize impacts to a level of less than significant, while the BCPA would not require mitigation to achieve this level of impact, but neither would result in significant impacts in these areas.

The extension of water and wastewater related infrastructure was determined to be significant under the CBP, while the NPA would eliminate those potentially significant construction-related GHG emissions impacts. Under both the NPA and the CBP, sufficient capacities are anticipated to be available at IEUA and area wastewater treatment plants. However, the resulting recycled water from the wastewater treatment plants may become unusable if the Basin would become out of regulatory compliance. If the ambient water quality in the Basin is not maintained per the RWQCB's TDS limit, there will be greater dependence on imported water and local stormwater supplies, which are highly volatile and impacted by climate change. Since the Basin only receives imported water from one regional pipeline that is owned and operated by MWD, an unplanned or catastrophic occurrence could cut off 25 percent of the Basin's water supply. A No Action approach results in the Chino Basin being out of regulatory compliance and threatens water supply. Therefore, when compared to the CBP Alternative, which would ensure that IEUA and member agencies would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years, once mitigation is implemented, the NPA would have a potential to result in a significant impact as under this alternative, the provision of sufficient water supply is not guaranteed. As such, under this evaluation and set of assumptions the proposed Project effects on utilities and service systems would be significant, and as such would not eliminate the significant impact that is anticipated to occur under the CBP. Impacts from both the CBP and the NPA would be significant and unavoidable under this issue.

Wildfire: The NPA would not result in any new facilities that have been proposed to operate under the CBP. The IEUA and member agencies would instead continue in a business as usual manner, which ultimately would result in the Chino Basin being out of regulatory compliance due to the continued use of recycled water containing higher levels of TDS. Anticipated future growth would generally be served with imported potable water and local agencies would need to increase their water purchases or implement more restrictive conservation programs to satisfy potable water demand. With no specific facilities required under the NPA, the NPA would have no potential to result in new impacts at existing IEUA facilities located in a very high fire hazard severity zone

that have not been identified previously. The CPB would require mitigation to minimize impacts to wildfire that would: reduce the project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan; and ensure fire hazard reduction measures are incorporated into a fire management plan/fuel modification plan for the proposed facility. As such, while the CBP would require mitigation to reduce wildfire impacts to a level of less than significant, the NPA would not result in any wildfire impacts. Under this evaluation and set of assumptions, the NPA would result in less overall wildfire impacts; however, the level of significance would be similar, if less than, that which would occur under the proposed CBP since neither the NPA nor the CBP would result in significant transportation impacts.

Conclusion

While the No Project Alternative (NPA) would reduce impacts related to Biological Resources, Greenhouse Gas and a part of Utilities and Service Systems below significance levels, the NPA has a potential to result in a significant impact to the Basin's hydrology resources and water quality characteristics, and may impact the sustainability of the Basin's groundwater supply, thereby resulting in significant Hydrology and Water Quality and Utilities and Service Systems impacts. As such, the NPA is not considered to be the environmentally superior alternative.

5.4 ALTERNATIVE 1: BASELINE COMPLIANCE PLAN ALTERNATIVE

Issues of rising TDS concentrations in recycled water nearing compliance levels and other regulatory challenges associated with contaminants of emerging concern puts the region at great risk. IEUA and its partners have invested significant time and money in identifying solutions to address these challenges. Though there are a number of solutions that IEUA could implement to address the groundwater recharge challenges associated with TDS and contaminants of emerging concern, none are as optimal as the implementation of advanced water purification. The Baseline Compliance Plan Alternative (BCPA) would address TDS levels for both direct use of recycled water and groundwater recharge and could also help address the challenges associated with Title 22 regulations. The BCPA considers a centrally located advanced water purification system can be linked with the existing distribution system providing greater flexibility for use of the advanced treated water, providing greater benefit to the region as an available supply and solutions for brine discharge that are more economically feasible. Also, it has the potential to be integrated in the future as direct potable reuse when such regulations are adopted.

As discussed above under Subsection 5.3, the reduced development BCPA has been included in this DPEIR in accordance with CEQA Guidelines Section 15126.6(e)(3)(A) and (B). Given that it is reasonably foreseeable that, without the implementation of the CBP, actions will need to be taken to ensure that IEUA remains in regulatory compliance through its continued operations, the BCPA (Alternative 1), is provided under this Subsection 5.4 to address this foreseeable result.

Under Alternative 1, the BCPA, centrally located advanced water purification facilities will be used with IEUA's existing conveyance system to help address the region's regulatory compliance challenges. The expected effluent TDS concentration from the AWPF is 100 mg/L. The AWPF would have a capacity comparable to that which is proposed by the CBP, and similarly, would be located at RP-4. This low-TDS recycled water could be used to meet discharge obligations to the Santa Ana River, or for blending into IEUA's existing recycled water distribution system using existing conveyance, significantly reducing recycled water TDS concentrations. Once blended

into IEUA's recycled water distribution system, the augmented recycled water supply could be used for groundwater recharge or for indirect potable use.

Table 5-1
ALTERNATIVE 1: BASELINE COMPLIANCE PLAN FACILITIES

Parameter	Description
AWPF	
Location	RP-4
Process	MF/RO/UV-AOP
Capacity (AFY)	15,000[1]
Purified water conveyance	
Pump station	
Location	RP-4
Size	1,500 HP
Brine conveyance	
Disposal system	NRWS
Pipeline	1,400 feet (8-inch)

Notes:
1 Phased with 9,000 AFY online by 2030 and the remaining 6,000 AFY by 2040
HP: horsepower
MF: membrane filtration
RO: reverse osmosis
UV-AOP: ultraviolet advanced oxidation process

As shown on **Table 5-1** above, the BCPA: Baseline Compliance Plan Facilities, would include a 15,000 AFY AWPF, a new 1,500 horsepower (HP) pump station at RP-4, and 1,400 lineal feet (LF) of 8-inch brine pipeline. These facilities would be phased with 9,000 AFY online by 2030 and the remaining 6,000 AFY by 2040. TAKE facilities are those that are associated with the extraction of groundwater from the Chino Basin and the conveyance of potable water supply. The BCPA does not include any TAKE facilities. The BCPA is only designed to meet water quality related regulatory challenges and does not include infrastructure to enhance regional water supply. As a result, the BCPA provides water quality benefits to IEUA and the region, but no water supply, ecosystem, or emergency supply benefits are realized through the BCPA.

Construction and operational scenarios for the facilities listed above are assumed to be comparable to those described in the CBP Project Description.

The following evaluation will also include identification of an environmentally superior alternative as required by the CEQA Guidelines. A summary comparative discussion of the BCPA in terms of the specific issues evaluated in this DPEIR is provided below.

Aesthetics: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Like the CBP, presence of construction equipment and related construction materials could be visible from public vantage points such as open space areas and public rights-of-ways such as roadways and sidewalks. However, construction impacts related to aesthetics would be temporary and short-term in nature and would not substantially affect scenic vistas or resources in the area. Construction would primarily occur in the daytime and would not result additional sources of light and glare. Overall, aesthetic impacts during construction would

be less intensive than the CBP due to the smaller scale of potential construction; however, the level of significance of construction-related aesthetic impacts similar to that which would occur under the CBP and would be less than significant.

Landscape disturbance from the development of new facilities and structures has the greatest potential to result in potentially significant permanent effects to scenic vistas and resources from conflict with local agency design guidelines. Most of the facilities would likely be underground, small, and/or similar to nearby existing facilities. However, less facilities would be constructed compared to the CBP. Once constructed, the facilities could conflict with the existing views of any nearby scenic resources. Aesthetic impacts to scenic vistas and resources from disturbance can be reduced to less than significant by shielding facilities and landscaping or revegetating disturbed areas either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in the area, as specified in MMs **AES-1** and **AES-2**. Furthermore, implementation of MM **AES-3** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant and MM **AES-4** would ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. As such, under this evaluation and set of assumptions, the BCPA would result in less overall operational aesthetic impacts; however, the level of significance of aesthetic impacts to scenic vistas and scenic resources from this alternative would be similar to that which would occur under the CBP and both would be less than significant with implementation of mitigation.

Like the CBP, facilities construction under the BCPA may include nighttime security lighting which could result in spill over lighting onto adjacent land uses. Also similar to the CBP, some new facilities could be a source of glare depending on reflectivity of the materials used. However, less facilities would be constructed than under the CBP and would likely result in less overall sources of light and glare compared to the CBP. Measures to reduce impacts related to light and glare, as specified in MM **AES-5** and **AES-6**, would be required to reduce light and glare impacts to less than significant. As such, under this evaluation and set of assumptions, the BCPA would result in less overall operational light and glare impacts; however, the level of significance would be similar to that which would occur under the proposed CBP and both would be less than significant with implementation of mitigation with the implementation of mitigation.

Agricultural and Forestry Resources: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. The location of these facilities are anticipated to be within RP-4, while the pipeline would be installed within road rights-of-way. As such, unlike the CBP, the proposed BCPA would not result in any impacts to agricultural or forestry resources, as none exist within these existing water and wastewater infrastructure facilities. However, installation of future CBP related facilities were determined to have a potentially significant impact to such resources; however, mitigation was identified to minimize agricultural and forestry resource impacts below significance thresholds. As such, under this evaluation and set of assumptions, the BCPA would result in less overall impacts to agricultural and forestry resources; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with implementation of mitigation with the implementation of mitigation.

Air Quality: As with the proposed CBP, IEUA activities under the BCPA would be intended to serve existing customers as well as future customers associated with planned growth in the Chino Basin. Therefore, as with the CBP, this alternative would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the SCAQMD's AQMP. The BCPA would include construction of an AWPF and a pump station at

RP-4 as well as a brine pipeline. Similar to the proposed CBP, construction and operation of these components would generate criteria air pollutant emissions. However, fewer facilities would be constructed under the BCPA as compared to the proposed CBP (e.g., no groundwater wells, no storage reservoir, no wellhead treatment facilities), and construction and operational criteria air pollutant emissions would likely be lower than those of the proposed CBP. Because of this, it is unlikely that maximum daily emissions during construction and operation of the BCPA would exceed SCAQMD regional or localized significance thresholds whereas construction activities under the CBP were determined to exceed the SCAQMD regional significance threshold for nitrogen oxide emissions (see Chapter 4.4, *Air Quality*). As with the proposed CBP, the relatively small scale of construction projects and operation and maintenance activities under the BCPA would minimize the potential for the exposure of sensitive receptors to substantial concentrations of carbon monoxide and toxic air contaminants. This alternative also would not likely include new facilities with the potential to generate substantial odorous emissions. While the BCPA would not require mitigation to reduce construction emissions to below significance thresholds, both the BCPA and CBP would result in less than significant impacts with the implementation of MM **AQ-1** applied to construction of CBP facilities. MM **AQ-1** entails using more efficient construction equipment engines to reduce emissions for the proposed CBP. As such, under this evaluation and set of assumptions, the BCPA would likely have fewer overall construction and operational emissions; however, the level of significance of air quality impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Biological Resources: As with the CBP, development of the BCPA would result in diversion of recycled water from the Santa Ana River through the development of a new AWPF with an ultimate capacity of 15,000 AFY, requiring a diversion of 17,000 AFY in total to support the AWPF operations. However, unlike the CBP, under the BCPA, the diversions would continue to the Santa Ana River in comparable amounts to that which occur at present. This is because no new recharge facilities would be installed as a result of the installation of the AWPF, and as such the recycled water would be treated to a higher quality and discharged or recharged in comparable amounts to those that would occur under IEUA's current operations. As such, while development of both the CBP would have a potential to cause significant unavoidable adverse impact to biological resources, specifically though the cumulative contribution to potential significant impacts to the Santa Ana Sucker due to the reduction in cumulative flows to the Santa Ana River, the BCPA would not contribute to this cumulatively considerable impact on the Santa Ana Sucker, as IEUA would not be forecast to reduce flows thereto. Furthermore, the potential for impacting site specific biological resources would be lessened under the BCPA when compared to the CBP, which would implement a greater number of facilities at locations presently unknown. Thus, there is a potential that a future CBP facility may be developed in an area containing significant biological resources; however, mitigation is available to ensure that a future CBP facility would not be developed in an area containing significant biological resources that cannot be avoided. These same measures would apply to the facilities that would be developed under the BCPA, though it is likely less measures would be required due to the anticipated development within existing developed sites. As such, under this evaluation and set of assumptions, the proposed CBP's effects on biological resources would likely be greater than the BCPA, and the BCPA would avoid a significant impact on biological resources that would otherwise result from implementation of the CBP.

It should be noted too, that the BCPA would eliminate the potential environmental benefit that would result from the CBP. As discussed in Chapter 3 of this DPEIR, the CBP would provide environmental benefits in call years, which will likely be in dry seasons, to improve habitat conditions enabling Feather River salmonid species greater chance for survival.

Cultural Resources: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. The location of these facilities are anticipated to be within RP-4, while the pipeline would be installed within road rights-of-way. The Chino Basin is a large expanse of area that may contain historical, archaeological, or paleontological resources. As such, future CBP projects may be developed within sites that contain such resources. However, unlike the CBP, the proposed BCPA would be installed mainly within developed sites and would also be covered under the site-specific cultural Investigation for RP-4. This site specific report determined that no significant resources are anticipated to be located within this site, and with implementation of mitigation, impacts to cultural resources at this site would be less than significant with the implementation of MM **CUL-1**. As such, while the CBP is proposed at the programmatic level as specific locations for most of the proposed CBP projects have not yet been determined, mitigation will be imposed to minimize impacts to cultural resources at future CBP facilities. This mitigation would also apply to development of the brine pipeline within existing road rights-of-way. As such, mitigation that would ensure that future BCPA and CBP facilities at sites that have not yet been evaluated will require a follow-on Phase I Cultural Resources Investigation and enforce several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project site where resources may be located would be required to minimize impacts to a level of less than significant. As such, under this evaluation and set of assumptions, the BCPA would likely have less potential to impact cultural resources; however, the level of significance of the cultural impacts that would result from this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Energy: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Similar to the proposed CBP, construction and operation of these components would consume energy. However, because fewer facilities would be constructed under the BCPA as compared to the proposed CBP (e.g., no groundwater wells, no storage reservoir, no wellhead treatment facilities), construction and operational energy consumption would likely be lower than that which would occur under the proposed CBP. Nevertheless, as with the proposed CBP, the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities would be minimized by compliance with existing applicable regulations. Furthermore, operational energy usage under the BCPA would not be wasteful, inefficient, or unnecessary because it would further the achievement of water quality standards for regulatory compliance and would be conducted in accordance with existing applicable regulations related to energy efficiency and vehicle fuel economy. Furthermore, similar to the proposed CBP, IEUA would likely procure energy to serve new facilities under the BCPA from SCE, which has historically achieved the Renewables Portfolio Standard, and would continue to seek opportunities to supply facilities constructed under the BCPA with other renewable energy sources in accordance with the goals and objectives of IEUA's CCAP. Therefore, this alternative would also be consistent with CARB's 2017 Climate Change Scoping Plan and the IEUA CCAP. As such, under this evaluation and set of assumptions, the BCPA would result in less overall construction and operational energy consumption; however, the level of significance of the energy impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Geology and Soils: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Similar to the proposed CBP, construction and operation of these components would be subject to geologic and soils-related constraints. However, because fewer facilities would be constructed under the BCPA as compared to the proposed CBP (e.g., no groundwater wells, no storage reservoir, no wellhead treatment facilities), there would be less overall potential for the BCPA to expose persons or structures to geologic hazards. Due to the

substantial geologic and soils-related constraints, the installation of future CBP and BCPA related facilities in locations where such constraints may occur could result in a potential for significant geology and soils impacts. However, several mitigation measures identified to minimize geology and soils impacts would be applicable to both the proposed CBP and the BCPA, including those mitigation measures that would: ensure new facilities are located outside of delineated fault zones through relocation; implementation of seismic design measures, or subsequent CEQA documentation; reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation; and minimize impacts to paleontological resources through requiring site-specific studies, where necessary. Under this evaluation and set of assumptions, the BCPA would result in less overall geology and soils impacts, particularly given that the location of the AWPF and brine pipeline would be outside of any delineated geology and soils related constraints, such as zones delineating potential for subsidence, liquefaction, ground rupture, landslide, etc.; however, given that site-specific geotechnical investigations have not yet been performed for the components of the BCPA, the same mitigation that is required and would apply to future CBP facilities would also apply to facilities proposed under the BCPA. As such, the level of significance of the geology and soils impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Greenhouse Gas: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Similar to the proposed CBP, construction and operation of these components would generate GHG emissions. However, because fewer facilities would be constructed under the BCPA as compared to the proposed CBP (e.g., no groundwater wells, no storage reservoir, no wellhead treatment facilities), construction and operational GHG emissions would likely be lower than those of the proposed CBP. As such, while the CBP could result in significant construction GHG construction emissions even with the implementation of MM **GHG-1,** the BCPA would not result in significant construction emissions, as it would require less intensive construction than the CBP. As such, the CBP would avoid a significant construction-related GHG emissions impact.

As with the proposed CBP, this alternative would not exceed the statewide 2030 target through generation of indirect GHG emissions associated with electricity consumption because IEUA would likely procure electricity from SCE, which is on-track to achieve 60 percent renewables by 2030. As the proposed CBP and, by extension the BCPA, have long operational horizons, it is not possible to know with certainty that the BCPA, which would contribute less operational GHG emissions than the CBP as a result of the minimal energy intensive facilities required to facilitate its operation, would procure its electricity from carbon-neutral electricity sources by 2045. This analysis assumes that, due to the focused types of facilities required to operate the BCPA—i.e., an AWPF at RP-4, at which, the phased capacity approach could possibly enable the planning of alternative energy sources to serve this facility by IEUA, a pump station, and a brine pipeline—electricity would likely be procured from carbon-neutral electricity sources by 2045. However, because of the uncertainty surrounding the future power mix and energy demands, this assumption is not guaranteed, and therefore, it is possible that a significant operations-related GHG impact could also occur with the BCPA should the future power mix fail to meet the carbon-neutral electricity requirement by 2045.

While the CBP would result in the net reduction of GHG emissions associated with the CBP's avoidance of SWP imports during call years, the BCPA would not facilitate a water exchange with MWD, and as such, it would not result in a direct offset of energy emissions related to utilization of imported water in the Basin. Ultimately, similar to the proposed CBP, the operations-related

GHG emissions impacts of this alternative would be potentially significant, even with the implementation of MM **GHG-2**. Implementation of MM **GHG-2** may reduce the energy usage and associated GHG emissions of facilities constructed under the BCPA and increase the percentage of electricity supplied to the proposed facilities by renewable energy resources, which would reduce operational GHG emissions. Nevertheless, as with the proposed CBP, implementation of MM **GHG-2** may not fully mitigate the impacts of the BCPA if IEUA is not able to supply the remaining electricity demand of these facilities from carbon-neutral electricity sources by 2045 or otherwise mitigate the operational emissions of the BCPA. As such, under this evaluation and set of assumptions, while the BCPA would likely result in fewer overall construction and operational GHG emissions, the level of significance of its GHG emissions impacts would be similar to that which would occur under the CBP and would therefore be significant and unavoidable.

Hazards and Hazardous Materials: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Similar to the proposed CBP, construction and operation of these components would be subject to hazards. However, because fewer facilities would be constructed under the BCPA as compared to the proposed CBP (e.g., no groundwater wells, no storage reservoir, no wellhead treatment facilities), there would be less overall potential for the BCPA to expose a site or persons to hazards and hazardous materials. Due to substantial hazard-related constraints, the installation of future CBP and BCPA facilities may occur at locations where such constraints may exist. As such, a potential for significant hazards and hazardous materials issue impacts from implementation of both the CBP and the BCPA exists. However, several mitigation measures were identified to minimize hazards and hazardous materials impacts, and these would apply to both the CBP and BCPA. Those mitigation measures include those that would: ensure that applicable facilities Business Plans incorporate best management practices designed to minimize the potential for accidental release of such chemicals; ensure that applicable facilities Business Plans identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material; ensure sensitive receptors will not be exposed to significant health threat by modeling the pathways of release and implementing specific measures that would minimize potential exposure to acutely hazardous materials; ensure hazardous materials are disposed of and delivered to licensed facilities; ensure the establishment of and adherence to specific thresholds of acceptable clean-up of hazardous materials; ensure the preparation of and adherence to vector management plans; ensure remediation of an accidental spill or discharge of hazardous material in compliance with state and local regulations; ensure that sites for future facilities obtain a Phase I Environmental Site Assessment and either avoid or remediate a site that is contaminated; ensure that any unknown contamination is remediated and handled according to the local CUPA; ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area; ensure that movement of the contamination plumes is contained to minimize contamination of groundwater at wells located in proximity, but outside of these plumes; ensure that construction traffic is managed safely; and ensure that fire hazard reduction measures are enforced. Therefore, though there will be some adverse impacts as a result of implementing either the CBP or the BCPA, specific mitigation measures would reduce potential project specific and cumulative (direct and indirect) hazards and hazardous material impacts to a less than significant level. As such, under this evaluation and set of assumptions, the BCPA would likely have less potential to result in significant hazard and hazardous materials impacts; however, the level of significance of the hazard and hazardous materials impacts that would result from this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Hydrology and Water Quality: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. As the intent of the BCPA is to ensure baseline regulatory compliance, it is anticipated that the BCPA would not result in any new water quality-related issues beyond those addressed and mitigated as part of the CBP. The low-TDS recycled water could be used to meet discharge obligations to the Santa Ana River, or for blending into IEUA's existing recycled water distribution system using existing conveyance, significantly reducing recycled water TDS concentrations. Once blended into IEUA's recycled water distribution system, the augmented recycled water supply could be used for groundwater recharge or for indirect potable use. However, with no new groundwater recharge facilities, the BCPA would not require the extensive mitigation related to storage of water in the Basin that would be required under the CBP. While the BCPA would result in the development of an AWPF with an equal capacity to the CBP, it would not result in the same diversion of flow from the Santa Ana River as it is anticipated that, once treated through the advanced treatment process, a portion of the low-TDS recycled water would be used to meet discharge obligations to the Santa Ana River. As such, under this alternative, and under the CBP, IEUA would continue to meet the baseflow obligation at Prado, with the BCPA offering the potential to enhance surplus flows, while the CBP would result in a minor reduction in surplus flows at Prado.

As such, though the CBP would require several mitigation measures to minimize impacts related to hydrology and water quality to ensure sustainable management of the Basin under the required storage and recovery program application, no significant impacts to the Basin would result under the CBP, and even without mitigation none would result from the BCPA. Both the CBP and the BCPA would require implementation of mitigation that would: ensure that drainage is managed through either runoff collection or development of a drainage plan for a given CBP project; require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future CBP facility sites; and ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. As such, under this evaluation and set of assumptions, the BCPA would likely have less potential to result in significant impacts under hydrology and water quality; however, the level of significance of the hydrology and water quality impacts that would result from this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Land Use and Planning: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Like the CBP, the facilities that could be constructed for the BCPA would not be anticipated to have features that would create a barrier or physically divide an established community. Because the precise location for facilities under the BCPA are known, it is not anticipated that any conflicts with existing land use would occur. Furthermore, per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. In addition, the cities and counties that are within the Chino Basin area have adopted General Plans that support the provision of adequate infrastructure; therefore, facilities constructed under the BCPA would not conflict with the goals and policies of the applicable General Plans. No conflicts with adjacent land uses would occur, as the proposed AWPF and pump station would be installed within the RP-4 site containing similar facilities or within existing road-rights-of way, which exist independent of land use designations. Ultimately, because the BCPA would result in fewer facilities when compared to the CBP, and because the proposed facilities would be installed within known locations, there would be less potential for conflicts to occur. MM LU-1 would be required to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses under the CBP, though this requirement would not apply to the BCPA, as its facility locations are known, and no land use

conflicts exist. As such, while the CBP would require mitigation to reduce impacts to a less than significant level, the BCPA would be less than significant without the need for added mitigation. Under this evaluation and set of assumptions, the BCPA would result in less overall land use impacts; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with mitigation.

Mineral Resources: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Like the CBP, construction of the facilities for The BCPA are unlikely to interfere with mining of mineral resources. Much of the Chino Basin has been urbanized, resulting in very few areas containing mineral resources that are not already utilized for mining activities. Installation and operation of the BCPA facilities would have no potential to result in a direct adverse impact on mineral resources, because the sites that have been selected for this alternative are currently developed with other uses, or consist of road rights-of-way. As such, while there is a minor potential for the CBP to result in the loss of availability of a known valuable mineral resource or result in the loss of availability of a locally important mineral resource recovery site requiring the implementation of MM **MR-1** to reduce the potential for impacts to mineral resources to a less than significant level, this mitigation measure would not be required under the BCPA. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the BCPA would be less than significant without the need for added mitigation. Under this evaluation and set of assumptions, the BCPA would result in less overall mineral resource impacts; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with implementation of mitigation.

Noise: As with the proposed CBP, construction and operational activities associated with the BCPA would have the potential to generate noise and vibration. Similar to the proposed CBP, construction activities under the BCPA may generate temporary increases in ambient noise levels and excessive groundborne vibration levels in excess of Federal Transit Administration and the California Department of Transportation construction noise thresholds at the nearest sensitive receptors. However, nighttime construction activities would likely not be required for the BCPA because it does not include new groundwater wells; therefore, no nighttime construction noise and vibration impacts would occur. In addition, operation of the AWPF, pump station, and brine pipeline under this alternative would not likely result in significant operational noise and vibration impacts because the brine pipeline would be located underground; the AWPF and pump station would be located at RP-4, which is not within 0.25 mile of sensitive receivers; and no vibration-generating equipment or processes are proposed. Nevertheless, because daytime construction and vibration impacts would be potentially significant, implementation of MMs **NOI-1** through **NOI-3** as well as MMs **NOI-4** through **NOI-6** would be required for the BCPA. Therefore, although this alternative would result in fewer noise and vibration impacts related to nighttime construction activities and operational activities, the level of impact of this alternative and the proposed CBP with implementation of applicable mitigation measures is equivalent. As such, under this evaluation and set of assumptions, the BCPA would likely have fewer overall noise and vibration impacts; however, the level of significance of the noise and vibration impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Population and Housing: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Unlike the proposed CBP, IEUA activities under the BCPA would be intended to meet water quality compliance challenges that would enable it to continue meeting existing demand. The CBP, comparatively, would provide a new source of local water that would be available to serve existing customers as well as future customers associated with planned growth in the Chino Basin. The BCPA would not include construction of new homes or

businesses and therefore would not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area. Like the CBP, any facilities constructed under the BCPA would be growth accommodating but would not induce population growth beyond that which has been accounted for in regional planning documents. Also similar to the CBP, the majority of construction and operations and maintenance staff for any new facilities can be expected to be drawn from the existing population within the Chino Basin. However, because less facilities would be constructed, less construction and operation and maintenance staff would be required.

Unlike the CBP, the location of facilities proposed by the BCPA are known, and therefore would have no potential to adversely impact existing housing. Under the CBP, if construction of facilities would impact housing, relocation assistance would be required in compliance with the California Relocation Assistance Act, as specified in MM **POP-1**. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the BCPA would be less than significant without the need for added mitigation. Under this evaluation and set of assumptions, the BCPA would result in less overall impacts related to population and housing; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with mitigation with the implementation of mitigation.

Public Services: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. Facilities constructed under the BCPA would not include construction of new homes or businesses that would result in a direct increase in population or new jobs that would increase demand for public services. Operation of the new facilities could require fire and police services in the unlikely event of an emergency; however, any increase in demand would be nominal. Similar to the CBP, a Hazardous Materials Business Plan would be required for use of chemicals at any of the new facilities, which would minimize the potential need for emergency services. Any new facilities would be fenced or access controlled to prevent illegal trespass, as required by MM **PS-1**. In addition, the majority of any new employees for operation and maintenance of new facilities would likely come from the existing population with the Chino Basin, and any increase in demand for schools, parks, or other public services would be nominal. The construction of new facilities would not cause a significant demand for parks and recreational facilities, and there would be no potential that the facilities could be located within parks or facilities designated for such use, as the facility locations under the BCPA are known and do not contain any such uses. Under the CBP, if impacts to parkland would occur, the CBP facilities would need to be relocated or supplemental parkland provided, as required by MM **PS-2**. As such, while the CBP would require mitigation to reduce impacts to a level of less than significant, the BCPA would be less than significant without the need for added mitigation. Under this evaluation and set of assumptions, the BCPA would result in less overall impacts related to public services; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with mitigation with the implementation of mitigation.

Recreation: The BCPA would include construction of an AWPF and a pump station at RP-4 as well as a brine pipeline. The BCPA would not require construction or expansion of recreational facilities. The BCPA would also not include construction of new homes or businesses. Therefore, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the Chino Basin area. Also similar to the CBP, the majority of construction and operations and maintenance staff for any new facilities can be expected to be drawn from the existing population within the Chino Basin. Therefore, any potential increased demand for parks and recreational facilities would be nominal. However, because less facilities would be constructed, less construction and operation and maintenance staff would be required, and increased demand for recreational facilities would be

less than the CBP. However, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Transportation: The BCPA would include construction and operation of a new AWPF, pump station at RP-4, and a brine pipeline. Construction activities associated with these new facilities may generate temporary increases in heavy truck and construction worker trips that could affect roadway, transit, bicycle, and pedestrian circulation as well as emergency access. This could be due to construction equipment staged within a public right-of-way affecting transit stops, bicycle, and/or pedestrian facilities, construction disturbance under existing transit, bicycle, and/or pedestrian thoroughfares, potential lane or road closures, construction vehicles affecting roadway movement and circulation, and/or blockage of emergency vehicle roadway and driveway access during construction. Therefore, the construction-related circulation and emergency access impacts of the BCPA would be potentially significant. However, with implementation of mitigation, specifically MM **TRA-1**, which requires preparation and implementation of a construction transportation management plan, construction-related circulation and emergency access impacts under the BCPA would be reduced to a less than significant level.

There would be fewer facilities constructed under the BCPA as compared to the proposed CBP, because the BCPA would include no groundwater wells, no storage reservoir, substantially less pipeline, no turnouts, and no wellhead treatment facilities. As such, operational VMT and potential operational impacts related to transportation circulation, design safety, and emergency access under the BCPA would be less than under the proposed CBP. Therefore, compared to the proposed CBP, the BCPA would result in slightly lesser impacts related to transportation. However, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Tribal Cultural Resources: Simply because the CBP would disturb a greater amount of area, the potential for encountering Tribal Cultural Resources is greater under the CBP. The BCPA will have similar impacts from its development, but those impacts would be less extensive due to the reduced area that would be disturbed from projects under the BCPA. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale projects, tribal and archaeological monitoring, and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to tribal cultural resources. Under this evaluation and set of assumptions the BCPA would have slightly less impacts on Tribal Cultural Resources when compared to the CBP; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Utilities and Service Systems: Under the CBP, significant impacts to stormwater drainage, energy, natural gas telecommunications, or solid waste were determined to be less than significant with the implementation of mitigation, and it is anticipated that the BCPA would have comparable, but less potential to impact these utility systems than the CBP. Under the CBP mitigation is required to minimize impacts related to stormwater through implementation of a drainage plan to reduce downstream flows for future CBP projects; this would be required to minimize impacts from the AWPF, pump station, and brine pipeline that would be developed under the BCPA. As the BCPA and CBP would both generate solid waste during operation and construction, with the BCPA generating less solid waste than the CBP, mitigation is required to address potential impacts related to solid waste, including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities;

and ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. The construction of infrastructure related to energy and natural gas under the CBP was analyzed and determined to be less than significant with the implementation of mitigation that would ensure that CBP projects not located in an area containing adjacent access to electricity and natural gas infrastructure would require subsequent CEQA documentation. This mitigation would not be required to reduce impacts under the BCPA as this alternative would be installed within RP-4, which already has access to electricity, and the brine pipeline would not require electricity beyond the pump station required at RP-4. Under the CBP, the construction of infrastructure related to telecommunications was determined to be less than significant with the implementation of mitigation that would ensure that CBP projects not located in an area containing adjacent access to telecommunication infrastructure would require subsequent CEQA documentation. This mitigation would not be required to reduce impacts under the BCPA as this alternative would be installed within RP-4, which currently have access to telecommunication facilities, and the brine pipeline would not require connection to such facilities. As such, for the issues of electricity, natural gas, and telecommunications, the CBP would require mitigation to minimize impacts to a level of less than significant, while the BCPA would not require mitigation to achieve this level of impact. However, for the issues of solid waste and stormwater drainage, mitigation would be required to minimize impacts to a level of less than significant for both the CBP and the BCPA.

The extension of water and wastewater related infrastructure was determined to be potentially significant under the CBP, and as the BCPA by eliminating those potentially significant construction-related GHG emissions impacts, would eliminate the potential for those significant impacts to occur. As with the CBP, the BCPA would ensure the provision of sufficient wastewater treatment capacity at area wastewater treatment plants through mitigation ensuring subsequent CEQA documentation is required where more brine conveyance capacity is required than area brine disposal facilities can accommodate. This is required because the BCPA would generate similar, though slightly less overall brine from the AWPF process. The CBP would generate additional brine associated with wellhead treatment facilities that are not considered under the BCPA. As previously stated, the CBP could result in potentially significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030 that would result from the extension of water- and wastewater-related infrastructure. As such construction of the CBP has the potential to hinder statewide GHG emissions targets, and therefore the proposed CBP could result in significant and unavoidable impacts related to construction of new or expansion or modifications to existing water and wastewater facilities. Given that the BCPA eliminates the potential for this construction-related GHG emissions impact as a result of the less intensive construction scenario required to develop the facility, and also due to the phased capacity approach proposed by the BCPA, the BCPA would eliminate the potentially significant utilities and service systems impact when compared to the CBP.

Wildfire: The location of CBP facilities was determined to likely not be located in designated very high fire hazard severity zones. But since many of the proposed CBP facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. Comparatively, since the proposed BCPA would be developed within known locations and alignments, it is known that these facilities would be located outside of a very high fire hazard severity zone, and therefore would have no potential to conflict with any wildfire related issues. The CBP would require mitigation to minimize impacts to wildfire that would: reduce the project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all

construction activities to be conducted in accordance with an approved construction traffic control plan; and ensure fire hazard reduction measures are incorporated into a fire management plan/fuel modification plan for the proposed facility. As such, the CBP would achieve a level of less than significant with mitigation, while the BCPA would not result in any wildfire impacts. Thus, with implementation of mitigation to minimize wildfire impacts, the CBP would not cause significant unavoidable adverse impacts under wildfire. Under this evaluation and set of assumptions the BCPA would have slightly less impacts on wildfire when compared to the CBP; however, the level of significance would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Conclusion

The Baseline Compliance Plan Alternative (BCPA) would lessen impacts in all categories to a level of less than significant, though it would continue to contribute to significant operational Greenhouse Gas emissions. This is because, while it is likely that electricity would be procured from carbon-neutral electricity sources by 2045, because of the uncertainty surrounding the future power mix and energy demands, this assumption is not guaranteed; therefore, it is possible that a significant operations-related GHG impact could occur should the future power mix fail to meet the carbon-neutral electricity requirement by 2045. The BCPA would not require as intensive construction, as it does not propose the same intensity of facilities proposed by the CBP. As such, the BCPA would result in lessened environmental impacts for all other resource issues and would also avoid potentially significant impacts under Biological Resources and Utilities and Service Systems, though significant operations related Greenhouse Gas impacts could still occur under this alternative. The BCPA would not create any new significant impacts beyond those identified by the CBP. As such, it is considered an environmentally superior alternative to the CBP; however, the BCPA would not achieve many of the CBP's Objectives.

While the BCPA would meet permit compliance for the continued use of recycled water in the Chino Basin and would maintain commitments for salt management to enable sustainable use of recycled water in the Basin, the BCPA would not develop infrastructure that addresses long term supply vulnerabilities, provide a source of water for emergency response, or develop an integrated solution to produce State and federal environmental benefits.

5.5 ALTERNATIVE 2: REGIONAL WATER QUALITY AND RELIABILITY PLAN ALTERNATIVE

Alternative 2, the Regional Water Quality and Reliability Plan, builds upon the Baseline Compliance Plan to address regional water quality and water supply challenges. PUT facilities for the Regional Water Quality and Reliability Plan Alternative are summarized in **Table 5-2**. PUT facilities for the Regional Water Quality and Reliability Plan include the AWPF; injection wells; purified water conveyance facilities; and brine conveyance. The Regional Water Quality and Reliability Plan alternative includes the same AWPF, pump station, 6,000 AFY of additional external supplies, and brine conveyance pipelines as the Baseline Compliance Plan Alternative. These facilities would not be phased, and the full capacity would be on-line by 2030. Additionally, the Regional Water Quality and Reliability Plan Alternative would introduce purified water pipelines, and groundwater injection facilities, including 16 injection wells.

Table 5-2
AWPF AND PUT FACILITIES FOR ALTERNATIVE 2:
REGIONAL WATER QUALITY AND RELIABILITY PLAN

Parameter		Description
Recharge Locations		MZ-2
AWPF		
	Location	RP-4
	Process	MF/RO/UV-AOP
	Capacity (AFY)	15,000
Purified water conveyance		
	Pipelines	7.1 miles (8-inch to 30-inch)
	Pump station	
	Location	RP-4
	Size	1,500 HP
	Number of injection wells	16 (12 duty, 4 standby)
Brine conveyance		
	Disposal system	NRWS
	Pipeline	1,400 feet (8-inch)

Notes:
MF: membrane filtration
RO: reverse osmosis
UV-AOP: ultraviolet advanced oxidation process

The Regional Water Quality and Reliability Plan would require TAKE facilities, including extraction wells, groundwater treatment facilities, pipelines, and connections that are integrated with the AWPF and injection well system. These facilities would collectively provide an extraction capacity of 15,000 AFY to support a delivered water capacity used to help address water supply challenges in the region. The extraction wells needed to support this capacity are assumed to be comparable to the extraction wells identified for the CBP designed to recharge up to 50,000 AFY. Furthermore, this alternative does not require connections to MWD's water distribution system as is the case for the proposed CBP.

The Regional Water Quality and Reliability Plan would collectively treat and store up to 15,000 AFY of recycled water in the Chino Basin, creating a new local water supply. This water will be available for local use for the 50-year project life of the alternative, thereby reducing dependence on imported water, improving water quality, and providing a new local water supply for the Basin. The Regional Water Quality and Reliability Plan would include a network of regional pipelines that would provide the ability for IEUA and its member agencies to access stored water in the Chino Basin, connecting these new potable water supplies for use in lieu of planned water deliveries from MWD. These new water conveyance and water system interconnections also provide an important alternative source of water supply to IEUA and its member agencies during any required shutdown of MWD's major pipelines delivering water to the region, such as the Rialto Pipeline, which is planned for rehabilitation as part of a larger rehabilitation plan of MWD's pipelines within its service area.

The production of high-quality water in the Chino Basin will deliver regional benefits in the form of enhanced water quality. The Regional Water Quality and Reliability Plan will also deliver regional benefits in the form of local water supply benefits available annually to offset the cost of imported water from MWD as well as to reduce the economic impact of supply shortages when MWD is unable to deliver full water supplies.

In addition, the Regional Water Quality and Reliability Plan provides local emergency supply benefits in years when planned or unplanned service disruptions occur.

Construction and operational scenarios for the facilities listed above are assumed to be comparable to those described in the CBP Project Description. The following evaluation will also include identification of an environmentally superior alternative as the CEQA Guidelines require. A summary comparative discussion of the Regional Water Quality and Reliability Plan Alternative (Alternative 2) in terms of the specific issues evaluated in this DPEIR is provided below.

Aesthetics: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Like the CBP, the presence of construction equipment and related construction materials could be visible from public vantage points such as open space areas and public rights-of-way such as roadways and sidewalks. However, construction impacts related to aesthetics would be temporary and short-term in nature and would not substantially affect scenic vistas or resources in the area. Construction would primarily occur in the daytime and would not result additional sources of light and glare. Overall, aesthetic impacts during construction would be slightly less intensive than the CBP due to the smaller scale of potential construction; however, the level of significance of construction-related aesthetic impacts is similar to that which would occur under the proposed CBP and both would be less than significant with the implementation of mitigation.

Landscape disturbance from the development of new facilities and structures has the highest potential to result in potentially significant permanent effects to scenic vistas and resources from conflict with local agency design guidelines. Most of the facilities would likely be underground, small, and/or similar to nearby existing facilities. Once constructed certain facilities could conflict with the existing views of any nearby scenic resources. Aesthetic impacts to scenic vistas and resources from disturbance can be reduced to less than significant by shielding facilities and landscaping or revegetating disturbed areas either with landscaping that is consistent with local design guidelines or with native vegetation consistent with that which occurs naturally in the area, as specified in MMs **AES-1** and **AES-2**. Furthermore, implementation of MM **AES-3** would ensure that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant and MM **AES-4** would ensure that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof. As such, under this evaluation and set of assumptions, Alternative 2 would result in comparable, if slightly less overall aesthetic impacts; however, the level of significance of aesthetic impacts to scenic vistas and scenic resources from this alternative would be similar to that which would occur under the proposed CBP and both would be less than significant with implementation of mitigation.

Like the CBP, facilities construction under Alternative 2 may include nighttime security lighting which could result in spill over lighting onto adjacent land uses. Also similar to the CBP some new facilities could be a source of glare depending on reflectivity of the materials used. Given that roughly the same type and number of above ground facilities would be developed under Alternative 2, measures to reduce impacts related to light and glare, as specified in MMs **AES-5**

and **AES-6**, would be required to reduce light and glare impacts to less than significant. As such, under this evaluation and set of assumptions, the level of significance of aesthetics impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Agricultural and Forestry Resources: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Within the Chino Basin, there are substantial agricultural resources. As such, installation of future CBP related facilities and by extension Alternative 2 related facilities, could result in a potentially significant impact to such resources; however, mitigation has been identified to minimize agricultural and forestry resource impacts below significance thresholds, including those that would: relocate or avoid impacts to important agricultural land; and relocate or avoid impacts to forest land or offset the loss by purchasing compensatory mitigation in the form of comparable forest land permanently conserved in either a local or State-approved important forest land mitigation bank. The location of these facilities is anticipated to be within RP-4, while the pipeline would be installed within road rights-of-way. This mitigation would ensure that future CBP or Alternative 2 related facilities would not contribute to significant agricultural and forestry resource impacts. As such, under this evaluation and set of assumptions, the level of significance of agricultural and forestry resource impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Air Quality: As with the proposed CBP, IEUA activities under Alternative 2 would be intended to serve existing customers as well as future customers associated with planned growth in the Chino Basin. Therefore, as with the CBP, this alternative would not lead to unplanned population, housing or employment growth that exceeds the forecasts used in the development of the SCAQMD's AQMP. Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Similar to the proposed CBP, construction and operation of these components would generate criteria air pollutant emissions. Modestly fewer facilities would be constructed under Alternative 2 as compared to the proposed CBP. Therefore, construction and operational criteria air pollutant emissions would likely be modestly lower than, but comparable to, those of the proposed CBP. The intensity of daily construction activities under Alternative 2 would potentially be similar to that which would occur under the proposed CBP. As such, similar to the CBP, maximum daily emissions during construction of Alternative 2 may exceed SCAQMD regional significance thresholds. Therefore, implementation of MM **AQ-1** would be required for Alternative 2 to address the exceedance(s) and would likely reduce impacts to a less than significant level, as with the proposed CBP. Furthermore, similar to that which would occur under the CBP, the relatively small scale of construction projects and operation and maintenance activities under Alternative 2 would minimize the potential for the exposure of sensitive receptors to substantial concentrations of carbon monoxide and toxic air contaminants. This alternative also would not likely include new facilities with the potential to generate substantial odorous emissions. Therefore, the level of impact of this alternative and the proposed CBP is equivalent with implementation of MM **AQ-1**. As such, under this evaluation and set of assumptions, Alternative 2 would likely have similar or fewer overall construction and operational emissions as the proposed CBP, and the level of significance of the air quality impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Biological Resources: As with the CBP, development of Alternative 2 would result in diversion of recycled water from the Santa Ana River through the development of a new AWPF with an ultimate capacity of 15,000 AFY, requiring a diversion of 17,000 AFY in total to support the AWPF operations. As such, the potentially significant impact identified under this issue that could result

from the CBP's diversion of flow to the Santa Ana River could also occur under Alternative 2. Furthermore, because the specific locations for future CBP and Alternative 2 projects are not presently known, there is a potential that a future facility for both may be developed in an area containing significant biological resources that cannot be avoided. Substantial mitigation provided under the CBP would therefore apply to Alternative 2 to ensure that a future facility would not be developed in an area containing significant biological resources that cannot be avoided. However, it has been determined that even with the implementation of substantial mitigation measures to avoid contributing to cumulatively considerable impacts to covered species and supporting habitat, which can be mitigated by implementing the HCP, impacts to one species may not be completely avoided. The proposed CBP's operations as well as Alternative 2's operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordinances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. Thus, both the CBP and Alternative 2 could potentially cause a significant unavoidable adverse impact to biological resources, specifically implementation could contribute cumulatively to potential significant impacts to the Santa Ana Sucker due to a reduction in cumulative flows to the Santa Ana River.

It should be noted that Alternative 2 would eliminate the potential environmental benefit that would result from the CBP. As discussed in Chapter 3 of this DPEIR, the CBP would provide environmental benefit in call years, which will likely be in dry seasons, to improve habitat conditions enabling Feather River salmonid species greater chance for survival.

Cultural Resources: As with the proposed CBP, IEUA activities under Alternative 2 would be intended to serve existing customers as well as future customers associated with planned growth in the Chino Basin. The Chino Basin is a large expanse of area that may contain historical, archaeological, or paleontological resources. As such, future CBP projects may be developed within sites that contain such resources which, due to the similar scope of Alternative 2, may also occur under Alternative 2. Both the CBP and Alternative 2 are proposed at the programmatic level, and as specific locations for most of the proposed CBP and Alternative 2 facilities have not yet been identified, mitigation imposed to minimize impacts to cultural resources at future CBP facilities that would also apply to Alternative 2. As such, mitigation to ensure that future CBP and Alternative 2 facilities at sites that have not yet been identified will require a follow-on Phase I Cultural Resources Investigation and enforce several phases or steps beyond the completion of a Phase I Cultural Resources Investigation that would cover the identification, evaluation, mitigation, and monitoring associated with a given project where resources may be located would be required to minimize impacts to a level of less than significant. As such, under this evaluation and set of assumptions, Alternative 2 would likely have a potential to impact cultural resources comparable to the CBP, and the level of significance of the cultural impacts that would result from Alternative 2 would be similar to that which would occur under the CBP and would be less than significant with the implementation of mitigation.

Energy: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Similar to the proposed CBP, construction and operation of these components would consume energy. Modestly fewer facilities would be constructed under Alternative 2 as compared to the proposed CBP. Therefore, construction and operational energy consumption would likely be somewhat lower than that which would occur under the CBP. However, as with the CBP, the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities would be minimized by compliance with existing applicable regulations. Furthermore, operational energy usage under Alternative 2 would not be wasteful, inefficient, or unnecessary because it would be in furtherance

of increasing local water supply reliability, reducing dependence on imported water, improving water quality, providing a new local water supply for the Chino Basin, and providing local emergency supply benefits. In addition, construction and operation of Alternative 2 would be conducted in accordance with existing applicable regulations related to energy efficiency and vehicle fuel economy. Furthermore, similar to the CBP, IEUA would procure energy to serve new facilities under Alternative 2, likely from SCE, which has historically achieved the Renewables Portfolio Standard, and IEUA would continue to seek opportunities to supply facilities constructed under Alternative 2 with other renewable energy sources in accordance with the goals and objectives of its CCAP. Therefore, this alternative would also be consistent with the CARB's 2017 Climate Change Scoping Plan and the IEUA CCAP. As such, under this evaluation and set of assumptions, Alternative 2 would result in similar or less overall construction and operational energy consumption, and the level of significance of its energy impacts would be comparable to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Geology and Soils: As with the proposed CBP, IEUA activities under Alternative 2 would be intended to serve existing customers as well as future customers associated with planned growth in the Chino Basin. Similar to the proposed CBP, construction and operation of these components would be subject to geologic and soils-related constraints. Because comparable facilities would be constructed under Alternative 2 as compared to the proposed CBP, there would be comparable overall potential for the Alternative 2 to expose persons or structures to geologic hazards. Due to the substantial geologic and soils-related constraints, installation of future CBP and Alternative 2 related facilities in locations where such constraints may occur could result in a potential for significant geology and soils impacts. However, several mitigation measures were identified to minimize geology and soils impacts would be applicable to both the CBP and Alternative 2, including those mitigation measures that would: ensure new facilities are located outside of delineated fault zones through relocation, implementation of seismic design measures, or subsequent CEQA documentation; reduce potential impacts from geological hazards through a design level geotechnical investigation with implementation of specific design recommendations, relocation of the site, or subsequent CEQA documentation; minimize impacts to paleontological resources through requiring site-specific studies, where necessary. Under this evaluation and set of assumptions, Alternative 2 would result in comparable overall geology and soils impacts to the CBP. Given that site-specific geotechnical investigations have not yet been performed for most of the components of either the CBP or Alternative 2, the same mitigation that will apply to future CBP facilities would also apply to facilities proposed under Alternative 2. As such, the level of significance of the geology and soils impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Greenhouse Gas: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Similar to the proposed CBP, construction and operation of these components would generate GHG emissions. Modestly fewer facilities would be constructed under Alternative 2 as compared to the proposed CBP. Therefore, construction and operational GHG emissions would likely be somewhat lower than those of the proposed CBP. Construction-related GHG emissions associated with the CBP would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore would potentially hinder the statewide GHG emission reduction target for 2030. Given the comparable levels of construction required to develop the facilities proposed under Alternative 2, construction related GHG impacts would be the same as those projected for the CBP. As such, while MM **GHG-1** would minimize

impacts to the greatest extent feasible, construction-related impacts from implementation of both the CBP and Alternative 2 could be potentially significant.

As with the proposed CBP, this alternative would not generate indirect GHG emissions associated with electricity consumption that exceed the statewide 2030 target because IEUA would likely procure electricity from SCE, which is on-track to achieve 60 percent renewables by 2030. However, similar to the proposed CBP, Alternative 2 would potentially fail to procure its electricity from carbon-neutral electricity sources by 2045 because of the uncertainty surrounding the future power mix and energy demands. Furthermore, Alternative 2 would not have the potential to result in the net reduction of GHG emissions associated with the CBP's avoidance of SWP imports during call years. Therefore, similar to the proposed CBP, the GHG emissions impacts of Alternative 2 could be potentially significant and implementation of MM **GHG-2** would be required. Implementation of MM **GHG-2** may reduce the energy usage and associated GHG emissions of facilities constructed under Alternative 2 and increase the percentage of electricity supplied to these facilities by renewable energy resources, which would reduce operational GHG emissions. Nevertheless, implementation of MM **GHG-2** may not fully mitigate the impacts of Alternative 2 if IEUA is not able to supply the remaining electricity demand of these facilities from carbon-neutral electricity sources by 2045 or otherwise mitigate the operational emissions of Alternative 2. As such, under this evaluation and set of assumptions, Alternative 2 would likely result in similar or potentially cumulatively greater overall construction and operational GHG emissions, and the level of significance of the GHG emissions impacts of Alternative 2 would be similar to that which would occur under the CBP and both could be significant and unavoidable.

Hazards and Hazardous Materials: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Similar to the CBP, construction and operation of these components would be subject to hazards. Because comparable facilities would be constructed under Alternative 2 as compared to the CBP, there would be comparable overall potential for the Alternative 2 to expose a site or persons to hazards and hazardous materials. Due to substantial hazard-related constraints, the installation of future CBP and Alternative 2 facilities may occur at locations where such constraints may exist. As such, a potential for significant hazards and hazardous materials issue impacts from implementation of both the CBP and Alternative 2 exists. However, several mitigation measures were identified to minimize hazards and hazardous materials impacts, which would apply to both the CBP and Alternative 2. Those mitigation measures include those that would: ensure that applicable facilities Business Plans incorporate best management practices designed to minimize the potential for accidental release of such chemicals; ensure that applicable facilities Business Plans identify the equipment and response capabilities required to provide immediate containment, control and collection of any released material; ensure sensitive receptors will not be exposed to significant health threat by modeling the pathways of release and implementing specific measures that would minimize potential exposure to acutely hazardous materials; ensure hazardous materials are disposed of and delivered to licensed facilities; ensure the establishment of and adherence to specific thresholds of acceptable clean-up of hazardous materials; ensure the preparation of and adherence to vector management plans; ensure remediation of an accidental spill or discharge of hazardous material in compliance with state and local regulations; ensure that sites for future facilities obtain a Phase I Environmental Site Assessment and either avoid or remediate a site that is contaminated; ensure that any unknown contamination is remediated and handled according to the local CUPA; ensure compliance with the appropriate airport land use plan and coordination with the appropriate airport management agencies to ensure safety for people residing or working within the project area; ensure that movement of the contamination plumes is contained to minimize contamination of groundwater at wells located in proximity, but outside of these plumes; ensure that construction traffic is managed safely; and ensure that fire hazard

reduction measures are enforced. Therefore, though there will be some adverse impacts as a result of implementing either the CBP or Alternative 2, specific mitigation measures would reduce potential project specific and cumulative (direct and indirect) effects to a less than significant impact level for hazards and hazardous material issues. As such, under this evaluation and set of assumptions, Alternative 2 would likely have comparable potential to result in significant hazard and hazardous materials impacts; the level of significance of the hazard and hazardous materials impacts that would result from this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Hydrology and Water Quality: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. As the intent of Alternative 2 to both address long-term water supply vulnerabilities and address water quality concerns by ensuring regulatory compliance, it is anticipated that Alternative 2 would not result in any new water quality-related issues beyond those addressed and mitigated as part of the CBP. Alternative 2 would result in the development of an AWPF with an equal capacity to the CBP, and also result in a diversion of some flow from the Santa Ana River. As such, under this alternative, and under the CBP, IEUA would continue to meet the baseflow obligation at Prado, with both alternatives resulting in a minor reduction in surplus flows at Prado.

As with the CBP, Alternative 2 would require several mitigation measures to minimize impacts related to hydrology and water quality to ensure sustainable management of the Basin under the required storage and recovery program application so that no significant impacts to the Basin would result. Both the CBP and Alternative 2 would require implementation of mitigation that would: ensure that drainage is managed through either runoff collection or development of a drainage plan for a given CBP project; require all disturbed areas that are not covered in hardscape or vegetation to be revegetated or landscaped at future CBP facility sites; and ensure that brine generated by water treatment systems would be disposed of in a manner that would minimize the potential for release of polluted runoff. As such, under this evaluation and set of assumptions, Alternative 2 and the CBP would have equal hydrology and water quality impacts; the level of significance of the hydrology and water quality impacts that would result from this alternative would be comparable to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Land Use and Planning: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Like the CBP, the facilities that could be constructed for Alternative 2 would not be anticipated to have features that would create a barrier or physically divide an established community. Land would need to be purchased for any proposed facilities. It can be reasonably assumed that siting of the facilities would include determination of the most suitable locations to place facilities, taking into consideration surrounding land uses. However, because the precise location for future facilities is presently unknown, the facilities may be developed across other designated land uses. Per Government Code Section 53091, building ordinances of local cities or counties do not apply to the location or construction of facilities for the projection, generation, storage, treatment, or transmission of water or wastewater. Therefore, any facilities constructed under Alternative 2 that could potentially conflict with local General Plan land use designations would not be subject to a conditional use permit or general plan amendment. In addition, the cities and counties that are within the Chino Basin area have adopted General Plans that support the provision of adequate infrastructure; therefore, facilities constructed under Alternative 2 would not conflict with the goals and policies of the applicable General Plans. As with the CBP, new facilities may conflict with adjacent land uses and as such MM **LU-1** would be required to minimize land use incompatibilities (such as lighting, noise, use of hazardous materials, traffic, etc.) with adjacent uses. As such,

under this evaluation and set of assumptions, Alternative 2 would result in comparable overall land use impacts; the level of significance would be similar to that which would occur under the CBP and both would be less than significant with mitigation.

Mineral Resources: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Like the CBP, construction of the facilities for Alternative 2 are unlikely to interfere with mining of mineral resources. Much of the Chino Basin has been urbanized, resulting in very few areas containing mineral resources that are not already utilized for mining activities. Installation and operation of the Alternative 2 facilities would have little potential to result in a direct adverse impact on mineral resources, unless the parcel(s) selected for such facilities are within an active mining area or are designated for recovery of mineral resources. Given that the proposed locations for the facilities are unknown, similar to the CBP, there is a minor potential for Alternative 2 to result in the loss of availability of a known valuable mineral resource or result in the loss of availability of a locally important mineral resource recovery site. As such, for both Alternative 2 and the CBP, implementation of MM **MR-1** would be required to reduce the potential for impacts to mineral resources to a less than significant level. There would be comparable potential for impacts to mineral resources under both the CBP and Alternative 2; as such, both would result in less than significant impacts with implementation of mitigation.

Noise: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Construction activities under Alternative 2 may generate temporary increases in ambient noise levels and excessive groundborne vibration levels in excess of Federal Transit Administration and the California Department of Transportation daytime and nighttime construction thresholds at the nearest sensitive receivers. In addition, facilities constructed under Alternative 2 may include noise-generating components that could result in a substantial permanent increase in ambient noise levels at nearby sensitive receptors, if present, depending on the equipment type, whether equipment is enclosed in a structure, the distance between equipment and nearby sensitive receivers, and the local jurisdiction's noise standards. Therefore, as with the CBP, construction and vibration impacts for Alternative 2 would be potentially significant, and implementation of MMs **NOI-1** through **NOI-6** would be required. As with the CBP, implementation of these mitigation measures would likely reduce Alternative 2's impacts to less than significant levels. Accordingly, under this evaluation and set of assumptions, the level of noise and vibration impacts of Alternative 2 and the CBP is equivalent and both would be less than significant with the implementation of mitigation.

Population and Housing: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. As with the CBP, IEUA activities under Alternative 2 would be intended to existing customers as well as future customers associated with planned growth in the Chino Basin. Alternative 2 would not include construction of new homes or businesses and would therefore not result in a direct increase in population or create a substantial number of new jobs that would result in new residents within the Chino Basin area. Like the CBP, any facilities constructed under Alternative 2 would be growth accommodating but would not induce population growth. Also similar to the CBP, the majority of construction and operations and maintenance staff for any new facilities can be expected to be drawn from the existing population within the Chino Basin. Furthermore, comparable construction and operation and maintenance staff would be required.

Like the CBP, the location of any future facilities is presently unknown, and it is remotely possible that the development of specific facilities could adversely impact existing housing. If construction of facilities would impact housing, relocation assistance would be required in compliance with the

California Relocation Assistance Act, as specified in MM **POP-1**. As such, under this evaluation and set of assumptions, the level of significance of the population and housing impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Public Services: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Facilities constructed under Alternative 2 would not include construction of new homes or businesses that would result in a direct increase in population or new jobs that would increase demand for public services. Operation of the new facilities could require fire and police services in the unlikely event of an emergency; however, any increase in demand would be nominal. Similar to the CBP, a Hazardous Materials Business Plan would be required for use of chemicals at any of the new facilities, which would minimize the potential need for emergency services. Any new facilities would be fenced or access controlled to prevent illegal trespass, as required by MM **PS-1**. In addition, the majority of any new employees for operation and maintenance of new facilities would likely come from the existing population with the Chino Basin, and any increase in demand for schools, parks, or other public services would be nominal. Although construction of new facilities would not cause a significant demand for parks and recreational facilities, similar to the CBP, there is a potential that the facilities could be located within parks or facilities designated for such use. If impacts to parkland would occur, the facilities would need to be relocated or supplemental parkland provided, as required by MM **PS-2**. As such, under this evaluation and set of assumptions, the level of significance of the public service impacts of this alternative would be similar to that which would occur under the CBP and both would be less than significant with the implementation of mitigation.

Recreation: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Alternative 2 would not require construction or expansion of recreational facilities. Alternative 2 would also not include construction of new homes or businesses. Therefore, there would not be a direct increase in population or a substantial number of new jobs that would result in increased demand for parks and recreational facilities within the Chino Basin area. Also similar to the CBP, the majority of construction and operations and maintenance staff for any new facilities can be expected to be drawn from the existing population within the Chino Basin. However, there is a potential for CBP or Alternative 2 facilities to be installed within either an existing park or a site that has been designated for such uses. MM **PS-2** is required to ensure that, for CBP or Alternative 2 facilities located within vacant land designated for park and/or recreation facility use, or for CBP or Alternative 2 facilities larger than one acre in size within existing park and/or recreation facilities, additional parkland is developed to supplement the loss of this parkland or recreation facility. Similarly, MM **REC-1** would ensure that, should construction of recreation or park facilities be required as a part of the Alternative 2 or the CBP, subsequent CEQA documentation will be prepared to ensure that impacts are appropriately assessed and avoided or mitigated. Therefore, any potential increased demand for parks and recreational facilities would be nominal. As such, under this evaluation and set of assumptions, the level of significance of the population and housing impacts of this alternative would be similar to that which would occur under the proposed CBP and both would be less than significant with the implementation of mitigation.

Transportation: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Construction activities associated with these new facilities may generate temporary increases in heavy truck and construction worker trips that could affect roadway, transit, bicycle, and pedestrian circulation as well as emergency access. This could be due to construction equipment staged within a public right-of-way affecting transit stops, bicycle, and/or pedestrian facilities, construction disturbance under

existing transit, bicycle, and/or pedestrian thoroughfares, potential lane or road closures, construction vehicles affecting roadway movement and circulation, and/or blockage of emergency vehicle roadway and driveway access during construction. Therefore, the construction-related circulation and emergency access impacts of Alternative 2 would be potentially significant. However, with implementation of mitigation, specifically MM **TRA-1**, which requires preparation and implementation of a construction transportation management plan, construction-related circulation and emergency access impacts under Alternative 2 would be reduced to a less-than-significant level with the implementation of mitigation.

There would be slightly fewer facilities constructed under Alternative 2 as compared to the CBP, because Alternative 2 would not include connections to MWD. As such, operational VMT and potential operational impacts related to transportation circulation, design safety, and emergency access under Alternative 2 would be slightly less than under the CBP. Therefore, compared to the proposed CBP, Alternative 2 would result in slightly lesser impacts related to transportation. However, the level of significance would be comparable to that which would occur under the CBP and would be less than significant.

Tribal Cultural Resources: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Simply because the CBP and Alternative 2 would disturb a similar amount of area, the potential for encountering Tribal Cultural Resources is comparable under both alternatives. When mitigation is implemented—primarily avoidance of tribally sensitive areas, further site-specific study of large scale projects, tribal and archaeological monitoring, and specific treatment requirements for buried Tribal Cultural Resources that may be uncovered during construction of future projects—both alternatives are forecast to cause less than significant impacts to tribal cultural resources. Under this evaluation and set of assumptions Alternative 2 would have comparable impacts on Tribal Cultural Resources to the CBP; however, the level of significance would be similar to that which would occur under the CBP and would be less than significant.

Utilities and Service Systems: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. Under the CBP, significant impacts to stormwater drainage, energy, natural gas telecommunications, or solid waste were determined to be less than significant with the implementation of mitigation, and as with the CBP, specifically as it relates to utilities infrastructure, it is anticipated that Alternative 2 would have comparable potential to impact these utility systems than the CBP. Under the CBP mitigation is required to minimize impacts related to stormwater through implementation of a drainage plan to reduce downstream flows for future CBP projects; this would be required to minimize impacts from the facilities that would be developed under Alternative 2. As Alternative 2 and CBP would both generate solid waste during operation and construction, mitigation is required to address potential impacts related to solid waste including those that would: ensure that construction and demolition materials that are salvageable are recycled, and thereby diverted from the local landfill, which will minimize the potential for CBP projects to generate waste in excess of local landfill capacities; and, ensure that soils that would generally be exported from a given construction site are salvaged where possible for recycled and ultimately reuse, thereby diverting this waste stream from the local landfill. The construction of infrastructure related to energy and natural gas under the CBP was analyzed and determined to be less than significant with the implementation of mitigation that would ensure that CBP projects not located in an area containing adjacent access to electricity and natural gas infrastructure would require subsequent CEQA documentation. This mitigation would also be required to reduce those same impacts under Alternative 2 as this alternative would be installed within locations that have not yet been selected. Under the CBP, the construction of infrastructure related to telecommunications was

determined to be less than significant with the implementation of mitigation that would ensure that CBP projects not located in an area containing adjacent access to telecommunication infrastructure would require subsequent CEQA documentation. This mitigation would also be required to reduce those same impacts under Alternative 2 as this alternative would be installed within locations that have not yet been selected. However, for the issues of solid waste, stormwater drainage, electricity, natural gas, and telecommunications, mitigation would be required to minimize impacts to a level of less than significant for both the CBP and Alternative 2.

The extension of water and wastewater related infrastructure was determined to be potentially significant under the CBP, and as Alternative 2 would not eliminate the significant construction-related GHG emissions impact, Alternative 2 could also have a potential for similar significant impacts to occur. As with the CBP, Alternative 2 would ensure the provision of sufficient wastewater treatment capacity at area wastewater treatment plants through mitigation that would ensure subsequent CEQA documentation is required where greater brine conveyance capacity is required than area brine disposal facilities can accommodate. This is required because Alternative 2 would generate similar amounts of brine from the AWPF process. As previously stated, the CBP could result in potentially significant impacts related to construction-related GHG emissions that would exceed the approximated SCAQMD threshold for 2030 of 6,000 MT of CO_2e per year during the most intensive year of construction activities (2027), and therefore could potentially hinder the statewide GHG emission reduction target for 2030 that would result from the extension of water- and wastewater-related infrastructure. As such, construction of the CBP has the potential to hinder statewide GHG emissions targets, and therefore could result in significant and unavoidable impacts related to construction of new or expansion or modifications to existing water and wastewater facilities. Given that Alternative 2 does not eliminate the potential for this construction-related GHG emissions impact, Alternative 2 could likewise result in comparable impacts; thus, under both alternatives, utilities and service systems impacts are significant and unavoidable.

Wildfire: Alternative 2 would include the same facilities proposed by the CBP excluding the pipeline and turnouts required to connect to MWD's system. The location of CBP facilities was determined to likely not be located in designated very high fire hazard severity zones, but since many of the CBP facilities sites have not yet been identified, it is possible that one or more future facilities could be required to locate within such areas. Comparatively, since the proposed Alternative 2 would be developed within unknown locations and alignments, it is possible that these facilities would have a potential to be located within a very high fire hazard severity zone. The CBP, and by extension, Alternative 2, would require mitigation to minimize impacts to wildfire that would: reduce the project's potential traffic conflicts that could be exacerbating in high fire hazard zones by requiring all construction activities to be conducted in accordance with an approved construction traffic control plan; and, ensure fire hazard reduction measures are incorporated into a fire management plan/fuel modification plan for the proposed facility. As such, the CBP would achieve a level of less than significant with mitigation. Thus, with implementation of mitigation to minimize wildfire impacts, neither the CBP nor Alternative 2 would cause significant unavoidable adverse wildfire impacts. Under this evaluation and set of assumptions Alternative 2 would have comparable impacts on Wildfire when compared to the CBP both would be less than significant with the implementation of mitigation.

Conclusion

The Regional Water Quality and Reliability Plan Alternative (Alternative 2) is comparable to the CBP in terms of environmental impacts. Because Alternative 2 would result in the development of nearly identical facilities to the CBP, excepting those which the CBP requires in order to connect to MWD's water distribution system, most of the impacts related to this alternative are the same as those identified under the CBP. It is possible that, due to reduction in pipeline lengths and turnouts required under this alternative when compared to the CBP, the construction related GHG emissions impact would be eliminated, but given the comparable construction scenarios, the elimination of this construction related GHG impact is not guaranteed. However, because Alternative 2 would not result in offset electricity consumption that would result from the water exchange with the SWP created by the CBP, it is likely the Alternative 2 would result in greater GHG emissions than would the CBP, and as such would not eliminate the operations related GHG impact. Note that Alternative 2 would ultimately reduce reliance on imported water, thus some of the energy related GHG emissions that may result from operation of Alternative 2 facilities would ultimately be offset by reducing reliance on the energy intensive imported water source. Regardless, Alternative 2 could result in a significant operations-related GHG emissions impact. Furthermore, Alternative 2 would not eliminate significant Biological Resources or Utilities and Service Systems impacts. As such, while Alternative 2 would lessen significant impacts under GHG, it would not eliminate significant impacts under any of the categories for which significant impacts have been identified under the CBP. Therefore, Alternative 2 cannot be considered an environmentally superior alternative.

Furthermore, while Alternative 2 would meet nearly all of the CBP's objectives, it would not meet one of the IEUA's basic objectives, which is to develop an integrated solution to produce State and federal environmental benefits. As such, under Alternative 2, the improvement of habitat conditions enabling Feather River salmonid species greater chance for survival would be eliminated, thus failing to meet this project objective.

5.6 SUMMARY OF ALTERNATIVES

In accordance with CEQA Guidelines Section 15126.6(d), a matrix summarizing the impacts of the alternatives compared to the proposed CBP is included in **Table 1.6-1**.

5.7 CONCLUSION

CEQA Guidelines Section 15126.6(b) requires the lead agency to identify, analyze and consider a range of reasonable alternatives to the proposed project. Elimination of potential environmental impacts of the proposed project should be considered when developing potential alternatives. As noted in Chapter 2 – Introduction – of this EIR, the potentially significant and unavoidable impacts of the proposed CBP are: Biological Resources, Greenhouse Gas, and Utilities and Service Systems.

The "no action" No Project Alternative (NPA) analyzed above would ultimately not be a feasible as it would lead to IEUA having to take actions in order to comply with mandatory regulatory requirements in order to continue operating as usual. As such, the NPA analyzed above would neither be feasible nor would it meet the fundamental project objectives outlined in the CBP Project Description. Specifically, the NPA would not meet permit compliance for continued use of recycled water in the Basin, nor would it maintain commitments for salt management to enable sustainable use of recycled water in the Basin. Neither would it address long-term supply

vulnerabilities or provide a source of water for emergency response. The NPA generally has lessened environmental impacts for all of the resource issues except for hydrology and water quality issues. The NPA would reduce significant biological resource and greenhouse gas impacts from a significant impact under the CBP to a level of less than significant. The NPA is forecast to result in a new significant unavoidable adverse impacts to hydrology and water quality, and would cause greater significant unavoidable adverse impacts under utilities and service systems than the CBP. Further, although the NPA would reduce potentially significant impacts identified in this DPEIR as compared to the proposed CBP, it would lead to greater impacts in some other areas, including hydrology and water quality and utilities and service systems. This is because the NPA would result in the Chino Basin being out of regulatory compliance and would threaten water supply. In the final analysis, the NPA clearly cannot be considered the environmentally superior alternative to the proposed project from a total environmental standpoint, because the environmental damage from implementing it is forecast to cause a significant adverse impact when compared to implementing CBP.

Finally, under the NPA, the ability to attain the goals and objectives as described under Chapter 3, Project Description, and listed in the paragraph above, would be virtually eliminated. The NPA would not obtain the CBP's basic objectives, and furthermore, although the NPA would reduce potentially significant impacts identified in this DPEIR as compared to the proposed CBP, it would lead to greater impacts in some other areas, including hydrology and water quality and utilities and service systems. In the final analysis, the NPA cannot be considered the environmentally superior alternative to the proposed CBP from a total environmental standpoint, because the environmental damage from implementing it is forecast to cause a greater significant adverse impact when compared to implementing CBP. It should be noted too, that the NPA would eliminate the potential environmental benefit that would result from the CBP. As discussed in Chapter 3 of this DPEIR, the CBP would provide environmental benefit in call years, which will likely be in dry seasons, to improve habitat conditions enabling salmonid species greater chance for survival. The NPA would not only forgo this environmental benefit, but it would also result in a threat to the reliability of water supply in the Chino Basin. Given this, the NPA is not considered an environmentally superior alternative.

The practical result of IEUA not approving the CBP would be IEUA at some point having to build a reduced development project like the Baseline Compliance Plan Alternative (BCPA; Alternative 1), as a way to provide the facilities required in order for the use of recycled water in the Chino Basin to continue under current permits and regulations. The reduced development BCPA, which as noted above is basically a "practical result" no project alternative, would lessen environmental impacts in all categories to a level of less than significant, though it could continue to contribute to potentially significant operational Greenhouse Gas emissions. This is because, while it is likely that electricity would be procured from carbon-neutral electricity sources by 2045, because of the uncertainty surrounding the future power mix and energy demands, this assumption is not guaranteed, and therefore, it is possible that a significant operations-related GHG impact could occur should the future power mix fail to meet the carbon-neutral electricity requirement by 2045. The BCPA would not require as intensive construction as the CBP as it does not propose the same intensity of facilities proposed by the CBP. As such, the BCPA would not create any new significant impacts beyond those identified by the CBP and result in lessened environmental impacts compared to the CBP. The BCPA would also avoid Biological Resources and Utilities and Service Systems significant impacts, although potentially significant operations related Greenhouse Gas impacts could still occur under it. As such, the BCPA is considered an environmentally superior alternative to the CBP.

However, the BCPA would not achieve several of the CBP's basic objectives. While the BCPA would meet permit compliance for the continued use of recycled water in the Chino Basin and would maintain commitments for salt management to enable sustainable use of recycled water in the Basin, the BCPA would not develop infrastructure that addresses long term supply vulnerabilities, provide a source of water for emergency response, or develop an integrated solution to produce State and federal environmental benefits.

The Regional Water Quality and Reliability Plan Alternative (Alternative 2) is comparable to the CBP in terms of environmental impacts. Because Alternative 2 would result in the development of nearly identical facilities to the CBP, excepting those which the CBP requires in order to connect to MWD's water distribution system, most of the impacts related to Alternative 2 are the same as those identified under the CBP. It is possible that, due to reduction in pipeline lengths and turnouts required under Alternative 2 when compared to the CBP, the construction related GHG emissions impact would be eliminated, but given the comparable construction scenarios, the elimination of this construction related GHG impact is not guaranteed. However, because Alternative 2 would not result in offset electricity consumption that would redound from the water exchange with the SWP created by the CBP, it is likely the Alternative 2 would result in greater GHG emissions than would the CBP, and as such would not eliminate operations related GHG impact. Note that Alternative 2 would ultimately reduce reliance on imported water; thus, some of the energy related GHG emissions that may result from operation of Alternative 2 facilities would ultimately be offset by reducing reliance on the energy intensive imported water source. Regardless, Alternative 2 would result in a significant operations-related GHG emissions impact. Furthermore, Alternative 2 would not eliminate significant Biological Resources or Utilities and Service Systems impacts. As such, while Alternative 2 would lessen significant impacts under GHG, it would not eliminate significant impacts under any of the categories for which significant impacts have been identified under the CBP. Therefore, Alternative 2 cannot be considered an environmentally superior alternative to the CBP.

Furthermore, while Alternative 2 would meet nearly all of the CBP's objectives, it would not meet one of the IEUA's basic objectives, which is to develop an integrated solution to produce State and federal environmental benefits. As such, under Alternative 2, the improvement of habitat conditions enabling Feather River salmonid species greater chance for survival would be eliminated, thus failing to meet this project objective.

CBP Benefits

Similar to the Regional Water Quality and Reliability Plan (Alternative 2), the CBP would collectively treat and store up to 15,000 AFY of recycled water in the Chino Basin, creating a new local water supply. The CBP would also include a regional pipeline connecting CBP potable water facilities to the region to provide in lieu use of CBP supplies, as well as connections to MWD with the ability to pump up CBP potable supplies into MWD's water distribution system. This in-lieu and direct pump-in use of CBP water supplies would allow the CBP to make up to 50,000 AFY available to MWD in drier years in exchange for the same amount of supply delivered by the SWP. In return, up to 50,000 AFY that would otherwise have been exported to MWD would be stored in Lake Oroville and used together with Delta carriage water savings to enhance instream flows in the Feather River.

Delta carriage water savings is an additional benefit of the Proposition 1 WSIP water exchange. SWP operations that transfer water across the Delta from upstream storage facilities to Delta export pumps under balanced conditions require additional upstream releases to maintain water quality in the Delta. This additional flow, known as "carriage water," is generally estimated by

DWR to be between 20 and 30 percent of the amount of water exported. Under Proposition 1 WSIP water exchange operations, SWP releases from Lake Oroville and Delta export pumping would be reduced compared to planned operations, and a carriage water savings would accrue in Lake Oroville. IEUA has proposed that 20 percent of pulse flow releases be accounted for as carriage water savings and applied towards the total pulse flow quantity. Any additional carriage water savings would accrue to the SWP for other purposes as a hedge against possible operational impacts caused by the exchanges. The CBP would reduce the required capacity and capital cost of the extraction facilities to be constructed be IEUA for the CBP, allow 20 percent of new CBP AWPF supplies to be used locally, and increase total maximum environmental pulse flows from Lake Oroville to 50,000 AFY.

This exchange element would be in operation during the first 25 years of the CBP, administered through agreements with DWR, CDFW, and MWD. The total production of CBP water supplies over 25 years is 375,000 AF. Of this sum, 75,000 AF is assumed to be available for local use and emergency response. The remaining 300,000 AF would be used for in lieu and pump in water deliveries to MWD. Together with projected Delta carriage water savings, a total of 375 ,000 AF would be available in Lake Oroville over the 25-year period for ecosystem improvement in the Feather River. After the 25-year period, the full 15,000 AFY of CBP supply would be available for local use, further reducing dependence on imported water, improving water quality, and providing a new local water supply for the region.

In addition to the public ecosystem improvement benefits provided by this dedicated water supply, the production of high-quality water in the Chino Basin will deliver benefits in the form of enhanced water quality (similar to the Baseline Compliance Plan and Regional Water Quality and Reliability Plan) and local water supply available to offset the cost of imported water from MWD and to reduce the economic impact of water supply shortages.

The CBP also provides emergency supply benefits in years when planned or unplanned service disruptions occur, and land subsidence mitigation benefits are achieved through new operational flexibility that will allow using recharged supplies to better manage groundwater pumping in areas sensitive to subsidence.

Table 5-3
COMPARISON OF ALTERNATIVES WITH RESPECT TO IEUA OBJECTIVES

Objectives		The BCPA: Baseline Compliance Plan	Alternative 2: Regional Water Quality and Reliability Plan	Proposed Project: Chino Basin Program
Protect and Enhance Regional Water Quality	Meet Permit Compliance for Continued Use of Recycled Water	✓	✓	✓
	Maintain Commitments for Salt Management	✓	✓	✓
Improve Regional Water Supply Reliability and Resiliency	Develop Infrastructure to Address Vulnerabilities		✓	✓
	Provide Source for Emergency Response		✓	✓
	Enhance Recharge		✓	✓
Develop an Integrated Solution to Produce Ecosystem Benefits				✓

Table 1.6-1
TABULAR COMPARISON OF PROJECT ALTERNATIVES

	Would the Project/Alternative Result in Significant Adverse Impacts to the Resource Issues of …?				**Which is the environmentally superior Alternative?**
	Chino Basin Program (CBP)	**No Project Alternative (NPA**	**Alternative 1: Baseline Compliance Plan (BCPA)**	**Alternative 2: Regional Water Quality and Reliability Plan**	
Aesthetics	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Agricultural	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Air Quality	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Biological Resources	Yes	No	No	Yes	NPA and BCPA are equal
Cultural Resources	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Energy	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Geology & Soils	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Greenhouse Gas	Yes	No	Yes	Yes	NPA
Hazards & Hazardous Materials	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Hydrology & Water Quality	No	Yes	No	No	CBP, BCPA and Alternative 2 are equal
Land Use & Planning	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Mineral Resources	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Noise	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Population & Housing	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Public Services	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Recreation	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Transportation & Traffic	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Utilities & Service Systems	Yes	Yes	No	Yes	BCPA
Wildfire	No	No	No	No	NPA; All Alternatives less than significant with or without mitigation
Would Meet Project Objectives?	Yes	No	Some	All Except One	-

CHAPTER 6 – TOPICAL ISSUES

Each environmental document contains a certain amount of duplication to ensure that information is conveyed to the decision-makers and interested members of the public in an organized fashion. Chapter 4 contains a detailed discussion of environmental effects that may result from implementing the proposed CBP. This includes a discussion of project specific and cumulative environmental impacts, as well as discussion of unavoidable adverse impacts for each topic evaluated in the PEIR. This section of the DPEIR combines three "topical issues" that are mandated in CEQA Guidelines Section 15126, which states: "The subjects listed below shall be discussed ... preferably in separate sections or paragraphs of the EIR." These sections are: (c) Significant Irreversible Environmental Changes Which Would be Involved in the Proposed Project Should it be Implemented and (d) Growth-Inducing Impact of the Proposed Project. CEQA Guidelines Section 15130 also requires a discussion of Cumulative Impacts. Because of the importance of this topic, a summary of the CBP's cumulative effects is included in this Chapter. The other major topics required in an EIR (Significant Environmental Effects; Unavoidable Significant Environmental Effects; and Mitigation Measures) are specifically addressed in Chapters 1 and 4 of this DPEIR. Alternatives to the proposed CBP are evaluated in Chapter 5.

6.1 GROWTH-INDUCING IMPACTS

CEQA requires a discussion of the ways in which a project could be growth inducing. (Public Resources Code, §21100(b)(5); CEQA Guidelines, §§15126(d), 15126.2(d).) The CEQA Guidelines identify a project as growth-inducing if it would foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. Growth inducement is not considered necessarily negative or beneficial. (Ibid.)

A project may indirectly induce growth by reducing or removing barriers to growth, or by creating a condition that attracts additional population or new economic activity. Projects that induce growth directly would include commercial or industrial development that hire new employees and residential development that provides housing. These direct forms of growth have a secondary effect of expanding the size of local markets and inducing additional economic activity in an area. Growth inducement may also occur if a project provides infrastructure or service capacity that accommodates growth beyond the levels currently permitted by local or regional land use plans. Further, growth that is consistent with local and regional plans, i.e., development within that already planned for an area, may not result in a significant effect on a community. Regardless, a project's potential to induce growth does not automatically result in actual growth. Growth only happens when the private or public sector responds to a change in the underlying development potential of an area with capital investment.

Typically, significant growth is induced in one of three ways. In the first instance, a project developed in an isolated area may bring sufficient urban infrastructure to cause new or additional development pressure on the intervening and surrounding land. This type of induced growth leads to conversion of adjacent acreage to higher intensity uses, either unexpectedly or through accelerated development. This conversion occurs because the adjacent land becomes more suitable for development and hence more valuable because of the availability of the new infrastructure. This type of growth inducement is often termed "leap frog" or "premature" development because it creates an island of higher intensity developed land within a larger area of lower intensity existing land uses.

The second type of significant growth inducement is caused when development of a large-scale project, relative to the surrounding community or area, produces a "multiplier effect" resulting in substantial indirect community growth, although not necessarily adjacent to the development site or of the same type of use as the project itself. This type of stimulus to community growth is typified by the development of major destination facilities, such as Disney World near Orlando, Florida, or around military facilities, such as the Marine Corps Air Ground Combat Center, near Twentynine Palms.

A third, subtler type of significant growth inducement occurs when land use plans are established that create a potential for growth because the available land and the land uses permitted result in the attraction of new development. This type of growth inducement is also attributed to other plans developed to provide the infrastructure necessary to meet the land use objectives, or community vision, contained in the governing land use agency's general plan. In this type of growth inducement, the ultimate vision of future growth and development within a project area is established in a city or county's General Plan or other comprehensive land use plan. The net effect of a General Plan's land use designations is to establish a set of expectations regarding future land use and growth that may or may not occur in the future, depending upon the actual demand and other circumstances when development is proposed. Thus, a plan may assign an area 100,000 square feet of commercial space, but if actual development does not ultimately generate demand for this much retail square footage, it may never be realized.

The proposed CBP is unusual because its implementation will not directly contribute to growth within the Chino Basin. During its implementation the high-quality recycled water stored within the Chino Groundwater Basin is allocated to meet a contractual obligation to the State Department of Water Resources and the California Department of Fish and Wildlife. In an extreme emergency the recycled water might be available to support local demand, but this is not its purpose, and any groundwater extractions to meet a local emergency would immediately have to be replenished. Over the long-term the AWPF and other CBP infrastructure facilities will be available to support sustainable management of the Chino Groundwater Basin, but only in support of the growth allowed by local General Plans and regional plans. The CBP will not induce growth directly since the additional number of employees is estimated to be 20 or less within an area currently populated with about 900,000 residents. Further, no indirect growth will be created because CBP infrastructure will be used to meet the existing Chino Basin population demands for water at the time the CBP terminates in 2053, not to support or induce growth at that time.

In summary, implementation of the proposed CBP would not result in a significant growth inducing impact through the extension of significant urban infrastructure to an isolated area. Moreover, the proposed CBP would also not indirectly induce substantial population growth through the creation of jobs and it would not be a new large project with the potential to create a "multiplier effect" that has not already been provided for in the local land use planning documents and that could induce growth beyond that anticipated in those planning documents. Finally, the CBP would not create or change a land use plan that might cause a potential for growth because the available land and the land uses permitted result in the attraction of new development. Though the CBP would create limited job growth, the amount in which it would indirectly induce growth is not considered to be significant.

6.2 CUMULATIVE IMPACTS

The intent of a cumulative impact evaluation is to provide the public and decision-makers with an understanding of a given project's contribution to area-wide or community environmental impacts

when added to other development that has occurred or that is proposed to occur in the region. Typically, cumulative impacts are discussed in relation to a list of past, present, and reasonably anticipated projects or in relation to broad growth projections and related area-wide impacts identified in general (city or county General Plan) or regional plans (such as, SCAQMD's Air Quality Management Plan, AQMP). (CEQA Guidelines § 15130(b).) For the proposed CBP, cumulative impacts are evaluated in the context of both types of cumulative impact forecast methodologies. The cumulative impact projections were made using regional planning documents and site-specific technical studies, and more specifically modeling that takes into account the existing and projected conditions within the Basin, with the proposed CBP being analyzed against these existing and projected conditions. Cumulative impacts are discussed in each issue subchapter of Chapter 4 in this DPEIR, and are either located at the end of each subchapter, or at the end of each individual issue under each subchapter.

Cumulatively considerable impacts from implementation of the CBP were identified for the topics of Biological Resources, Greenhouse Gas, and Utilities and Service Systems. Please refer to each individual subchapter of Chapter 4 (Chapters 4.5, 4.9, and 4.20) for an expanded discussion of cumulative impacts.

The following summary of cumulative impacts is provided for all the issues addressed in the Draft PEIR. If any CBP Infrastructure facility results in a potential to create a cumulatively considerable adverse impact for an environmental issue, a second-tier CEQA evaluation will be compiled and processed.

Aesthetics: Construction of the CBP facilities could alter existing views and contribute to significant cumulative aesthetic impacts in combination with other projects in the program area. The implementation of MMs **AES-1** through **AES-7** would ensure that those proposed facilities' contribution to cumulative aesthetic impacts would be reduced to less than cumulatively considerable by: ensuring that facilities and landscaping comply with local design standards and are integrated with local surroundings; ensuring that impacts to scenic resources from the implementation of future CBP facilities will be avoided or assessed further in future CEQA documentation; ensuring that the proposed facilities' impacts to scenic resources, such as trees, are minimized to a level of less than significant; ensuring that future facilities are either not located within sites containing scenic resources or undergo subsequent CEQA documentation to fully analyze the impacts thereof ensuring compliance with the applicable zoning code; ensuring that future facilities will conform with design requirements established by local jurisdictions; and, ensuring that light and glare impacts from future structures associated with the CBP are minimized. Thus, the proposed CBP would not make a cumulatively considerable contribution to any aesthetics impacts.

Agricultural and Forestry Resources: While cumulative development within the region may result in cumulatively significant impacts related to loss of and impacts to agricultural and forestry resources, the cumulative analysis of each Agriculture and Forestry Resources issue evaluated in Subchapter 4.3 of the DPEIR determined that the proposed project would not result in a considerable contribution to cumulative impacts to agricultural and forestry resources within the Chino Basin. There are no forestry resources located within the CBP's area of potential impact. However, the following mitigation measures (**AGF-1 and AGF-2)** will need to be implemented to reduce agricultural resource impacts to a less than significant impact level. Therefore, the proposed CBP has a less than significant potential to result in a cumulatively considerable contribution to any agricultural and forestry resources impacts.

Air Quality: The geographic scope for the analysis of cumulative impacts of criteria air pollutants and air quality plans is the South Coast Air Basin (SCAB). The SCAQMD AQMP addresses cumulative air quality impacts in the SCAB based on future growth predictions based on the general plans of local jurisdictions. For this reason, development consistent with the applicable city or county General Plan would also be consistent with the AQMP. Cumulative development within the SCAB is not anticipated to result in a significant impact in terms of conflicting with the AQMP because the majority of cumulative projects would be consistent with their respective General Plans and the growth already anticipated under the AQMP and the Southern California Associated Governments (SCAG) Connect SoCal regional planning document. The CBP would serve water supply needs for existing and planned water demand and would not result in or accommodate unplanned growth. Therefore, the CBP, in combination with other cumulative projects would not conflict with or obstruct implementation of the AQMP. No cumulative impact would occur.

The cumulative impact to the SCAB due to criteria air pollutant emissions associated with existing basin-wide polluting activities is significant because the SCAB is already classified as nonattainment for ozone, PM10, and PM2.5 (see Table 4.4-2). The SCAQMD's CEQA Air Quality Significance Thresholds indicate that any projects in the SCAB with daily construction and/or operational emissions that exceed any of the indicated thresholds in Table 4.4-3 should be considered as having an individually and cumulatively significant air quality impact.[1] With mitigation incorporated (**AQ-1**), emissions from the CBP would not exceed the regional thresholds, even with worst-case maximum daily construction scenarios (see Table 4.4-6). Therefore, the CBP would not result in a cumulatively considerable contribution to air quality impacts.

The geographic scope for the analysis of cumulative impacts relative to sensitive receptors is the Chino Basin because sensitive receptors (e.g., residences, schools, and hospitals) are interspersed throughout the area where the proposed CBP facilities would be located. Cumulative growth in the project area would have the potential to result in carbon monoxide hotspots and emissions of diesel particulate matter. However, emissions from CBP construction and operation, including emissions of carbon monoxide and PM2.5, would be below significance thresholds that are designed to protect the health of sensitive receptors. Furthermore, the overall net vehicle trips associated with the CBP would be negligible in the context of background traffic. Therefore, the CBP would not result in any cumulatively considerable air quality impacts on sensitive receptors.

The geographic scope for the analysis of cumulative impacts relative to odorous emissions is the area immediately surrounding the odor source. Objectionable odors are not cumulative in nature because the air emissions that cause the odors disperse rapidly beyond the odor source, making the odor less detectable. Cumulative projects as well as the CBP would be required to comply with SCAQMD Rule 402 (Nuisance). Therefore, the CBP, in combination with other cumulative projects, would not result in a significant cumulative impact associated with odorous emissions.

Biological Resources: Cumulative biological resource impacts can only occur when such resources are not avoided, protected or mitigated as outlined above. The mitigation requirements outlined in Section 4.5.7 (**BIO-1** thru **BIO-26**) are identified to ensure that biological resources are avoided or otherwise protected or mitigated, such that the only cumulatively considerable impacts to significant biological resources forecast to occur are to the Santa Ana sucker, as the mitigation

[1] SCAQMD. 2019. "South Coast AQMD Air Quality Significance Thresholds." Last modified: April 2019. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf (accessed October 2021).

available to protect this species cannot conclusively protect it from being significantly impacted by cumulative diversions from the Santa Ana River. This is discussed further in the final paragraph under this header.

The CBP would result in direct impacts such as the removal or modification of local hydrology, the redirection of flow, and the placement of fill material. Potential indirect impacts on jurisdictional waters include a number of water-quality-related impacts: erosion and transport of fine sediments or fill downstream of construction to unintentional release of contaminants into jurisdictional waters that are outside of the project footprint. Temporary impacts on jurisdictional waters include the placement of temporary fill during construction in both man-made and natural jurisdictional waters. Temporary fill could be placed during the construction of access roads and staging/equipment storage areas. The temporary fill would result in a temporary loss of jurisdictional waters and could potentially increase erosion and sediment transport into adjacent areas.

In the case of man-made features, these impacts would remove or disrupt the limited biological functions that these features provide. In natural areas, these activities would remove or disrupt the hydrology, vegetation, wildlife use, water quality conditions, and other biological functions provided by the resources. Therefore, these impacts should be quantified and analyzed in a second-tier environmental evaluation.

The proposed CBP project operations may result in a reduction in surface flows in the Santa Ana River and into Prado Basin. In addition, Low Impact Development ordnances, local policies, and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports sensitive species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub. To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, the SAR HCP has determined that potential impacts of water management agencies in the Upper Santa Ana River Watershed that generate cumulative impacts to covered species and supporting habitat can be mitigated by implementing the HCP, except for one species. As such, the CBP could contribute cumulatively considerable impacts to the Santa Ana Sucker. The SAR HCP DEIR concluded that such impacts should be treated as cumulatively considerable and unavoidably significant given the possibility that the effectiveness of some of the HCP mitigation measures cannot be guaranteed to be successful. As a contributor to this cumulative effect and a Permittee Agency, IEUA concurs with this finding.

Cultural Resources: As the IEUA service area continues to develop with projected growth, new residential, commercial, and industrial developments would occur. The project vicinity contains many historical, archaeological, and paleontological resources that, in many cases, have not been well documented or recorded. Thus, there is the potential for ongoing and future development projects in the vicinity to destroy known or unknown historical, archaeological, and paleontological resource sites resulting in a significant cumulative impact.

The potential construction impacts of the CBP, in combination with other projects as a result of growth in the area, could contribute to a cumulatively significant impact to specific historical, archaeological, and paleontological resources if encountered during project construction. However, implementation of MMs **CUL-1** through **CUL-4** would minimize the contributions of the CBP to cumulatively significant impact on specific historical, archaeological, and paleontological resources, and the CBP's contribution would not be cumulatively considerable.

The Chino Basin area is largely urbanized with residential, commercial, and industrial development, though many areas still exist that have not historically been disturbed at depth, such as agricultural sites. As the area continues to develop, it is possible, but unlikely, that construction activities could impact unknown human remains. However, since the treatment of human resources is governed by PRC Section 5097.98 and Health and Safety Code Section 7050.5, the cumulative potential to impact human remains would be less than significant. Therefore, the implementation of the CBP would not result in a cumulatively considerable contribution to impacts on human remains.

Energy: The cumulative analysis of each energy issue evaluated in Subchapter 4.7 of the DPEIR determined that the proposed CBP would not result in a cumulatively considerable contribution to energy impacts within the Chino Basin without the need for mitigation. While cumulative development within the region may result in significant cumulative impacts related to area energy consumption, the potential for the proposed CBP to contribute to a cumulatively considerable contribution to such impacts has been minimized through the offset in energy consumption due to a reduction in imported water deliveries. Since this is an essential component of the CBP, no mitigation is required.

Geology and Soils: Future cumulative development may experience significant impacts associated with geotechnical constraints within the Chino Basin, including impacting resources such as paleontological resources, that occur below ground. Similarly, development of the CBP would be affected by geotechnical constraints within the Chino Basin. None of the CBP's future on-site or off-site project-related activities are forecast to cause changes in geology or soils or the constraints affecting the project area that cannot be fully mitigated. Therefore, with the implementation of mitigation measures **GEO-1** and **GEO-2**, and adherence to the regulatory requirement, the proposed CBP would have a less than significant contribution to cumulatively considerable geology or soils impacts within the Basin.

Greenhouse Gases/Global Climate Change: Impacts related to GHG emissions are, by definition, cumulative impacts because they affect the worldwide accumulation of GHGs in the atmosphere. Because the effects of climate change are currently occurring (as described in **Section 4.9.2,3, Potential Effects of Climate Change**), the cumulative worldwide and statewide effects of GHG emissions are significant. For the analysis of impacts related to GHG emissions, CEQA focuses on whether the incremental contribution of a proposed project is cumulatively considerable and thus significant in and of itself. The CBP would be consistent with many of the goals of applicable federal, State and local plans and programs designed to reduce GHG emissions and would result in a net reduction in GHG emissions over the 25-year term of the proposed water transfer agreements (see **Table 4.8-2**). As discussed previously, construction-related GHG emissions could exceed the approximated SCAQMD threshold in the most intensive year of construction (2027).

In addition, although the CBP would result in a net reduction in total GHG emissions as compared to existing baseline conditions, the CBP's electricity consumption itself may not be carbon-neutral because GHG emissions may still be generated in both call and non-call years due to the use of electricity supplied from non-renewable energy resources by 2045. As a result, the CBP might not meet the State's long-term GHG emission reduction goal of carbon neutrality, and its GHG emissions should thus be considered cumulatively considerable. Implementation of MM **GHG-2** would reduce the energy usage of CBP facilities and increase the percentage of electricity supplied to CBP facilities by renewable energy resources. Nevertheless, implementation of this mitigation measure may not fully mitigate project impacts if IEUA is unable to supply the remaining

electricity demand of CBP facilities from carbon-neutral electricity sources by 2045 or otherwise mitigate CBP operational emissions. Therefore, impacts could be significant and unavoidable.

Furthermore, as stated above, from a cumulative perspective, if the CBP would result in OCWD requiring an increase in imported water due to reduced surplus flows to the SAR, the cumulative energy demand would be increased commensurate with the amount of imported water OCWD would require from the SWP, thereby requiring energy to deliver an unknown amount of imported water to OCWD to supplement its supply. Nevertheless, as determined above, the CBP could contribute cumulatively considerable GHG emissions as a result of the CBP's electricity consumption itself, which may not be carbon-neutral by 2045, thereby potentially hindering the State's 2030 and long-term GHG emission reduction goals. It would be somewhat speculative to determine to what extent the increased use of imported water by OCWD would increase the CBP's cumulative contribution to GHG emissions; regardless, the CBP could contribute to a cumulatively considerable GHG impact that cannot be mitigated.

Although GHG emissions generated by construction and operation of the proposed CBP could result in a significant and unavoidable impact under CEQA for the aforementioned reasons, the CBP would support the State's effort to adapt to climate change by developing new local water supplies that beneficially reuse wastewater and avoid imported water from the SWP. The CBP is a necessary improvement to mitigate the impacts of climate change on water supply reliability, especially during critically dry years, which are expected to increase in frequency and intensity due to climate change. As the climate changes, the State must adapt to climate change by improving water management resilience to account for warmer temperatures and declining snowpack. New facilities built under the CBP would help manage water supply variability, thereby stabilizing water reliability in areas with limited water supply.

Hazards and Hazardous Materials: The cumulative analysis of each Hazards and Hazardous Materials issue in Subchapter 4.10 of the DPEIR determined that the proposed CBP would not result in a cumulatively considerable contribution to hazards and hazardous materials impacts within the Chino Basin as a result of implementation of mitigation measures. While cumulative development within the region may result in significant cumulative impacts related to exposure to hazards, the potential for the proposed CBP to contribute to a cumulatively considerable contribution to such impacts has been minimized to a level of insignificance through the implementation of mitigation measures (**HAZ-1** through **HAZ-9**, **HYD-7**, **TRAN-1**, and **WF-1** and **WF-2**).

Hydrology and Water Quality: Cumulative impacts that would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan would result from cumulative development and water management in the Chino Basin. As the proposed CBP only has the potential to impact the Chino Basin which, as noted above, is an adjudicated basin, the impacts discussion under this issue are inherently cumulative. Therefore, by implementing the mitigation actions that the Watermaster may require to conduct the CBP, which are enforceable via Mitigation Measures **HYD-1** through **HYD-7** and Measures **HYD-8** through **HYD-13,** the IEUA will ensure that the CBP will not contribute to cumulatively considerable impacts on the Basin resulting in the obstruction of implementation of the Chino Basin Judgment. As such, with the implementation of MMs **HYD-1** through **HYD-13**, the proposed project would not result in a cumulatively considerable contribution to hydrology and water quality impacts.

Land Use and Planning: The CBP would not divide an established community and would not contribute to cumulative impacts related to the physical division of an established community. Implementation of the proposed project would increase the resiliency and sustainability of regional water resources management within the Chino Basin area. The CBP would help support water supply needs of future development within local cities and counties as envisioned in their applicable General Plans, in addition to providing a dedicated environmental water supply to benefit Bay Delta instream flows. With implementation of mitigation (**LU-**1) to ensure land use conflicts are minimized upon implementation of the CBP infrastructure, the CBP would not conflict with any land use plan, policy, or regulation in a manner that could result in a cumulatively considerable contribution to any land use or planning impacts, significant or otherwise.

Mineral Resources: The project has a minor potential to result in the loss of availability of mineral resources. Future cumulative development could be located in areas known to contain locally important mineral resources, particularly in the northern portion of the Chino Basin. Therefore, cumulative development could result in significant mineral impacts. The proposed CBP projects would result in less than significant impacts to important mineral resources and mineral resource sites through the implementation of MM **MR-1**, which would ensure that CBP facilities are relocated outside of locations containing important mineral resource, or compensate for development proposed to be located within an area containing significant mineral resources. As such, implementation of the CBP would not result in a cumulatively considerable contribution to impacts on mineral resources.

Noise: *Cumulative Measures: Implementation of MMs **NOI-1 through NOI-4** is required.*

The geographic scope for cumulative noise impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed CBP. This geographic scope is appropriate for noise because the proposed program's noise impacts are localized and site-specific. Beyond this distance, typical construction and operational noise would be indistinguishable from the background noise level due to distance attenuation and interference from environmental conditions (e.g., topography and air disturbance).

Construction Noise

If concurrent construction activities occur in close proximity to proposed CBP activities, combined construction noise would have the potential to impact the same sensitive receivers and result in cumulative construction noise levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction noise impacts may be potentially significant. Nevertheless, per MMs **NOI-2** and **NOI-3**, individual projects with the potential to generate construction noise in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction noise studies and incorporate noise reduction measures to reduce noise levels to the FTA daytime and nighttime construction noise standards. As a result, regardless of whether a significant cumulative construction noise impact is occurring, the proposed CBP's noise contribution would not be cumulatively considerable with incorporation of MMs **NOI-2** and **NOI-3**.

On-site Operational Noise

Depending on the specific locations of the projects implemented under the proposed CBP, it is possible that cumulative development is currently results in cumulatively considerable operational noise impacts if operational noise exceeds the applicable jurisdiction's noise level standards at sensitive receptors. Therefore, the CBP's cumulative operational noise impacts may be potentially significant. Nevertheless, per MM **NOI-4**, individual CBP projects with the potential to generate on-site operational noise in proximity to sensitive receptors would be required to complete project-level operational noise studies and incorporate noise reduction measures to reduce noise levels to the noise level standards of the applicable jurisdiction. As a result, regardless of whether a significant cumulative operational noise impact is occurring, the proposed CBP's noise contribution would not be cumulatively considerable with incorporation of MM **NOI-4**.

Off-site Traffic Noise

Cumulative growth in the Chino Basin would result in increased traffic volumes on local and regional roadways. However, as discussed above, due to the relatively low number of anticipated operation and maintenance trips associated with individual CBP projects, impacts related to off-site roadway noise would be incremental and likely inaudible; therefore, the proposed program would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise.

Vibration

The geographic scope for cumulative vibration impacts is generally within 0.5 mile of the locations of individual projects that may be implemented under the proposed CBP. This geographic scope is appropriate for vibration because the proposed program's vibration impacts are localized and site-specific. Beyond this distance, typical construction and operational vibration would be indistinguishable from the background vibration level due to distance attenuation and interference from environmental conditions.

If concurrent construction activities occur in close proximity to proposed CBP activities, combined construction vibration would have the potential to impact the same sensitive receivers and result in cumulative construction vibration levels that exceed the applicable thresholds of significance. The severity of the impacts would vary depending upon the intensity of construction activities for cumulative projects and the proximities of residential, commercial, and industrial land uses to each construction site. Therefore, cumulative construction vibration impacts may be potentially significant. Nevertheless, per MMs **NOI-5** through **NOI-7**, individual projects with the potential to generate construction vibration in proximity to sensitive receivers and other concurrent construction activities would be required to complete project-level construction vibration studies and incorporate vibration reduction measures to reduce vibration levels applicable standards, as feasible. As a result, regardless of whether a significant cumulative construction vibration impact is occurring, the proposed CBP's vibration contribution would not be cumulatively considerable with incorporation of MMs **NOI-5** through **NOI-7**.

Airport Noise

As discussed above, public use airports and private airstrips are located throughout the Chino Basin. The specific locations of individual projects that may be implemented under the proposed CBP are not all known at this time; therefore, it is also unknown whether individual projects or

cumulative projects would be located within the vicinity of airports. Nevertheless, individual projects and cumulative projects would be required to comply with the applicable airport land use plan, federal and State Occupational Safety and Health Administration regulations, and applicable California Building Code standards related to the protection of residents and workers from exposure to excessive aircraft noise. As a result, regardless of whether a significant cumulative noise impact related to airport operations exists, the proposed CBP would not have a cumulatively considerable contribution to this potential cumulative impact, significant or otherwise, and no mitigation is required.

Population and Housing: The proposed CBP would not result in a cumulatively considerable contribution to population growth within the region. While development in the region may result in displacement of people or housing, with the implementation of MM **POP-1,** the CBP would have a less than cumulatively considerable potential to displace people or housing and would therefore not result in a cumulatively considerable contribution to population and housing impacts.

Public Services: The proposed CBP would not result in a cumulatively considerable contribution to population growth within the region, and as such, it would not substantially increase demand for public services. However, without MM **PS-1**, which requires all CBP project sites to be fenced, the CBP has a potential to attract trespass, and thus result in greater demand for police protection. With the implementation of MM **PS-1**, police protection impacts would be reduced to a level of less that cumulatively considerable, and therefore would not contribute to significant cumulative impacts thereof. However, the proposed project has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the CBP could have a potential to decrease parkland within the region, and as a result could have a cumulatively considerable impact on them. MM **PS-2** would ensure that CBP site selection would not impact the cumulatively available parkland within the region, thus reducing the impacts to parks to less than cumulatively considerable. Therefore, the project would not result in a cumulatively considerable contribution to impacts on public services.

Recreation: The proposed CBP would not result in a cumulatively considerable contribution to population growth within the region, and as such, it would not substantially increase demand for recreation facilities. However, the CBP has a potential to be developed within sites designated for or currently containing parks and recreation facilities. Thus, the CBP could have a potential to decrease parkland within the region, and could result in a cumulative considerable impact as a result. MM **PS-2** would ensure that CBP site selection would avoid and, if not possible, replace available parkland within the region, and MM **REC-1** would ensure that subsequent CEQA documentation is completed should new park or recreation facilities be required to replace a loss thereof as a result of CBP implementation, thus reducing the impacts to park and recreation facilities to less than cumulatively significant. Therefore, the project would not result in a cumulatively considerable contribution to impacts on recreation.

Transportation:

Construction Impacts

Overlapping cumulative construction activities, simultaneous lane/road closures, and simultaneous staging of construction equipment and materials in public rights-of-way could result in cumulative construction impacts related to transportation circulation patterns in the project area, transit stops, bicycle and pedestrian facilities, and/or emergency access. Cumulative construction activities are expected to increase construction vehicles traveling on the roadways. While

individual emergency vehicles could be slowed if traveling behind a slow-moving truck, vehicle codes require vehicles to yield to emergency vehicles using a siren and red lights. As such, cumulative impacts related to construction transportation circulation and emergency access within Chino Basin would be potentially significant. However, the proposed CBP would be required to implement MM **TRAN-1**, which requires coordination with other active construction projects within 0.25 mile of project construction sites to minimize simultaneous lane and/or road closures, major deliveries, and haul truck trips. MM **TRAN-1** also requires designating alternate detour routes and construction transportation routes that avoid these projects to the maximum extent practicable. Similarly, MM **WF-1** would require the preparation of a Traffic Control Plan with comprehensive strategies to reduce disruption to traffic in general, but particularly to maintain emergency access or evacuation capabilities. Therefore, with mitigation incorporated, the proposed project would not have a cumulatively considerable contribution to the significant impacts related to construction transportation circulation and emergency access.

Operational Impacts

Operations related to buildout of cumulative development within the project area, including the projects assumed under buildout of the various jurisdictions' general plans within the Chino Basin, would increase cumulative operational roadway vehicle volumes on local roadways. The cumulative increase in roadway vehicle volumes would have the potential to increase cumulative operational VMT in the project area. As such, cumulative impacts related to operational transportation circulation and VMT within Chino Basin could be potentially significant. However, project-related VMT would be negligible in comparison to the high volumes of VMT generated by the types of residential, commercial, and industrial projects assumed under buildout of the various jurisdictions' general plans within the Chino Basin. Therefore, the proposed CBP would not have a cumulatively considerable contribution to the significant impacts related to operational transportation circulation and VMT.

Tribal Cultural Resources: CBP implementation can proceed without causing any unavoidable significant adverse impacts to Tribal Cultural Resources (TCRs). Upon implementation of identified mitigation measures, the proposed CBP is not forecast to cause any direct, significant adverse impact to any site specific TCRs, and as a result the CBP has no potential to make a cumulatively considerable contribution to TCR impacts in the project area, i.e., the Chino Basin. This is because impacts to individual TCRs at specific sites would be mitigated and site specific; as such, the CBP's contribution to cumulative TCR impacts, whether significant or mitigated below significance thresholds, would not be cumulatively considerable. Any TCRs discovered on a project site that would be adversely impacted by proposed future projects would be mitigated to a level of insignificance by implementing one or more of mitigation measures **TCR-1** through **TCR-3**. With implementation of the appropriate measures, CBP projects are not forecast to cause or contribute to cumulatively considerable tribal cultural resource impacts.

Utilities and Service Systems: The cumulative analysis of each Utilities and Service System issue evaluated in Subchapter 4.20 of the DPEIR determined that the proposed CBP would result in a cumulatively considerable contribution to utilities and service system impacts within the Chino Basin, even with the implementation of mitigation measures. Cumulative impacts would occur as a result of construction of water and wastewater related facilities proposed by the CBP which would contribute cumulatively considerable contributions to greenhouse gas emissions. All other issues were determined to contribute less than cumulatively considerable contributions to utilities and service systems impacts as the potential for the CBP to result in a cumulatively considerable

contribution to such impacts has been minimized through the implementation of mitigation measures, **UTIL-1** through **UTIL-5**.

Wildfire: The cumulative analysis of the Wildfire issue evaluated in Subchapter 4.21 of the DPEIR determined that the proposed CBP would not make a cumulatively considerable contribution to cumulative wildfire hazards for two primary reasons: 1) most, if not all, of the CBP infrastructure is proposed to be located within urban areas or outside of very high FHSZs in LRAs or, 2) if a facility must be located within a severe wildfire hazard area, MMs **WF-1** and **WF-2** would be implemented. As such, while overall wildfire risk may be exacerbated by cumulative development within very high FHSZs, with the implementation of MMs **WF-1** and **WF-2**, the CBP would not result in a cumulatively considerable contribution to wildfire impacts.

Conclusion

As summarized in the preceding text, a substantial majority of the environmental topics addressed in the DPEIR were determined to contribute a less than cumulatively considerable adverse impact to the environment in which the CBP will be implemented. The following issues fall into this less than cumulatively considerable category: aesthetics, agricultural and forestry resources, air quality, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, and wildfire.

Cumulatively considerable impacts from implementation of the CBP were identified for the topics of Biological Resources, Greenhouse Gas, and Utilities and Service Systems. The basis for these findings is explained in the text presented above, and in the respective Subchapters in Chapter 4, Subchapters 4-4, 4-9, and 4-20.

6.3 SIGNIFICANT IRREVERSIBLE AND/OR UNAVOIDABLE ENVIRONMENTAL IMPACTS

In considering the topic of “Significant Irreversible and/or Unavoidable Environmental Impacts,” it is important to define the terminology that is used in making impact forecasts. For example, an “unavoidable significant adverse environmental impact” is an effect of a proposed project that cannot be avoided or reduced below some specific threshold of significance by any available or feasible mitigation measure or feasible alternative to that project. These impacts are discussed in the subchapter text for each environmental issue in Chapter 4 of this DPEIR. Three unavoidable significant adverse environmental impacts have been forecast to occur if the CBP is implemented. These three unavoidable significant adverse environmental impacts are: Biology Resources, Greenhouse Gases/Global Climate Change, and Utilities and Service Systems. Please refer to the pertinent Subchapters (Biology Subchapter 4.5, Greenhouse Gases/Global Climate Change Subchapter 4.9, and Utilities and Service Systems Subchapter 4.20) for the detailed findings regarding these forecast unavoidable significant adverse environmental impacts.

An irreversible impact is an impact that once experienced, cannot be changed or modified, by any means. Irreversible impacts have more nuance than do unavoidable impacts. For example, if a project results in the death of the last individual of an endangered species, this impact cannot be reversed (at least with technology available at this time). For the present we cannot make any more individuals of the species. On the other hand, if air emissions from a project exceed established thresholds and are considered unavoidably significant, it is feasible that future improvements in air emissions controls could reverse this impact and reduce (reverse) or perhaps

eliminate the air emissions and reduce or reverse the significant impact. For example, if a project's mobile source emissions contribute to a significant air quality impact, increased availability and/or adoption of electric vehicles could reduce the air quality emissions attributable to that project. Thus, the potential for a reversal of an identified impact, be it less than significant or significant, depends on the time scale used for evaluation (forever or just next year) and the likelihood that sufficient resources (societal or individual) will be applied to reverse an impact.

Another example that illustrates this topic is the potential exposure of people to an accidental spill of an acutely hazardous or toxic substance. If the threat is significant enough, society will demand that such exposure be eliminated immediately. Thus, such a spill and the related exposure to the hazard may be a significant environmental impact but it is typically immediately reversed. Where it is not reversed, the potential significant effects will remain until sufficient individual or societal resources are expended to eliminate the impact.

The significant impact projections were made using regional planning documents and site-specific technical studies. Significant impacts are discussed for each issue in 20 of the 21 Subchapters of Chapter 4 in this document. A discussion of significant impacts, including unavoidable significant impacts, can be found at the end of each Subchapter for each topic discussed in Chapter 4. As noted above, three significant unavoidable impact were determined to result from implementation of the CBP. Please refer to each individual Subchapter of Chapter 4 for an expanded discussion of significant unavoidable impacts.

Of these three unavoidable significant impacts, all three are considered reversible, again assuming that society as willing to allocate sufficient resources to reverse the impacts. For example, through adaptive management in the Santa Ana River and an adequate budget, it should be possible to maintain a managed population of the Santa Ana Sucker. However, based on the current resources and management strategy, and out of an abundance of caution, the SAR HCP DEIR concluded the impact would be unavoidably significant and adverse. Relative to GHG emissions, this unavoidable significant adverse impact can be reversed, both naturally over time (an estimated 100 years for CO_2 in the atmosphere), and more directly by implementing evolving strategies to prevent GHG emissions (such as from proper capping of oil wells), or by pulling GHG pollutants, particularly methane and CO_2, out of the atmosphere. At this point in time these potential measures are not yet implemented, but they are nearing the implementation stage. Finally, the Utility and Service System impacts were found unavoidable because of construction GHG emissions associated with constructing CBP Infrastructure facilities. As noted, this finding for Utilities and Service Systems can ultimately be mitigated through managing GHG emissions before they occur or through extraction from the atmosphere.

Thus, none of the forecast unavoidable significant adverse impacts are irreversible. However, there are some less than significant impacts where the impacts are irreversible. For example, energy consumption is irreversible. Once consumed, the energy resources cannot be recreated. Minerals and materials (iron and steel for example) consumed to support CBP Infrastructure may be recycled, but in general these resources are disposed of and their consumptive use cannot be reversed. Thus, there are less than significant environmental resources that will be consumed in conjunction with CBP implementation, and this consumption is not considered reversible in our current societal context.

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CHAPTER 7 – PREPARATION RESOURCES

7.1 REPORT PREPARATION

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- *Draft Chino Basin Program Assumptions Technical Memorandum No. 1* prepared by Brown and Caldwell in association with WSC, Inc. dated August 4, 2020
- *Draft Final Chino Basin Program PUT, TAKE, and Program Alternatives Evaluation Technical Memorandum No. 2* prepared by Brown and Caldwell in association with WSC, Inc. dated October 2021
- *Draft Brine Disposal System Technical Memorandum No. 3, July 31, 2020* prepared by Brown and Caldwell in association with WSC, Inc. dated July 31, 2020
- *Evaluation of the Chino Basin Program/Water Storage Investment Program* prepared by West Yost dated October 15, 2021

- *Air Quality Technical Report* prepared by Woodward & Curran dated October 2021
- *Biological Resources (assembled)*
    - *Upper SAR HCP – Covered Species*
    - *Upper SAR HCP Draft EIR – Biological Resources Impacts*
    - *RP-4 Site-Specific Biological Resources Assessment* prepared by Jacobs dated October 2021
- *Cultural Resources Survey, Proposed AWPF at RP-4, City of Rancho Cucamonga* prepared by CRM TECH dated October 17, 2021
- *Energy Resources Technical Report* prepared by Woodward & Curran dated October 2021
- *Greenhouse Gas Technical Report* prepared by Woodward & Curran dated October 2021
- *Chino Basin Optimum Basin Management Program, 2020 State of the Basin Report* prepared by West Yost dated June 2021
- *Chino Basin Optimum Basin Management Program, 2020 Maximum Benefit Annual Report* prepared by West Yost dated April 2021
- *Noise Data Sheets prepared by Rincon dated October 25, 2021*

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CHAPTER 8 – APPENDICES

8.1 NOTICE OF PREPARATION / DISTRIBUTION LIST

8.2 NOP COMMENT LETTERS

APPENDIX 8.1

NOTICE OF PREPARATION / DISTRIBUTION LIST

Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

TO: California Office of Planning and Research
Responsible AND Trustee Agencies AND Federal Agencies
Other Interested Parties

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting

PROJECT: Inland Empire Utilities Agency Chino Basin Program

LEAD AGENCY: Inland Empire Utilities Agency

Date: September 15, 2021

NOTICE OF PREPARATION:

The Inland Empire Utilities Agency (IEUA) will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the proposed Chino Basin Program (CBP or Project or Program). The IEUA is seeking input from the general public, public agencies, and interested parties regarding the scope and content of the environmental information that should be analyzed in the EIR, including input regarding any topics or specific issues that are germane to a particular agency's statutory responsibilities in connection with the proposed Project. A short description of the Project, as well as the location and potential environmental effects, are discussed below. A detailed project description is provided as an attachment to this Notice of Preparation (NOP). In accordance with Section 15060(d) of the State CEQA Guidelines the IEUA has determined that an EIR will be prepared to address all of the standard issues identified in the Standard Environmental Assessment Form/Initial Study. Thus, no Initial Study accompanies this NOP.

POTENTIAL RESPONSIBLE/TRUSTEE AGENCIES: The IEUA is preparing the CBP Program Environmental Impact Report (PEIR) as the Lead Agency, in cooperation with the California Department of Water Resources (DWR), the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board, and the Metropolitan Water District of Southern California (Metropolitan) as responsible agencies. The California Water Commission (CWC) is a Responsible Agency, as it is the Agency that has conditionally awarded IEUA with funding to implement the CBP through the Proposition 1 Water Storage Investment Program (WSIP). Other agencies that may be Responsible Agencies or Trustee Agencies include: Cucamonga Valley Water District, City of Fontana, Fontana Water Company, Jurupa Community Service District, Three Valleys Water District, and Western Municipal Water District. The Chino Basin Watermaster, while not a Public Agency, is the court-created entity that administers the Judgment that adjudicated the groundwater rights of the Chino Groundwater Basin (Chino Basin), and as such, modifications proposed by the CBP to the Safe Storage Capacity and facilities proposed under the CBP that might impact the Chino Basin would occur under the authority of the Watermaster.

PROJECT LOCATION: The proposed project would occur within IEUA's service area, which occurs almost entirely within the Chino Basin. IEUA's service area is located in southwestern San Bernardino County, and serves approximately 875,000 residents in a 242-square mile service area, while the Chino Basin consists of about 235-square miles of the upper Santa Ana River watershed. The Chino Basin is bounded:

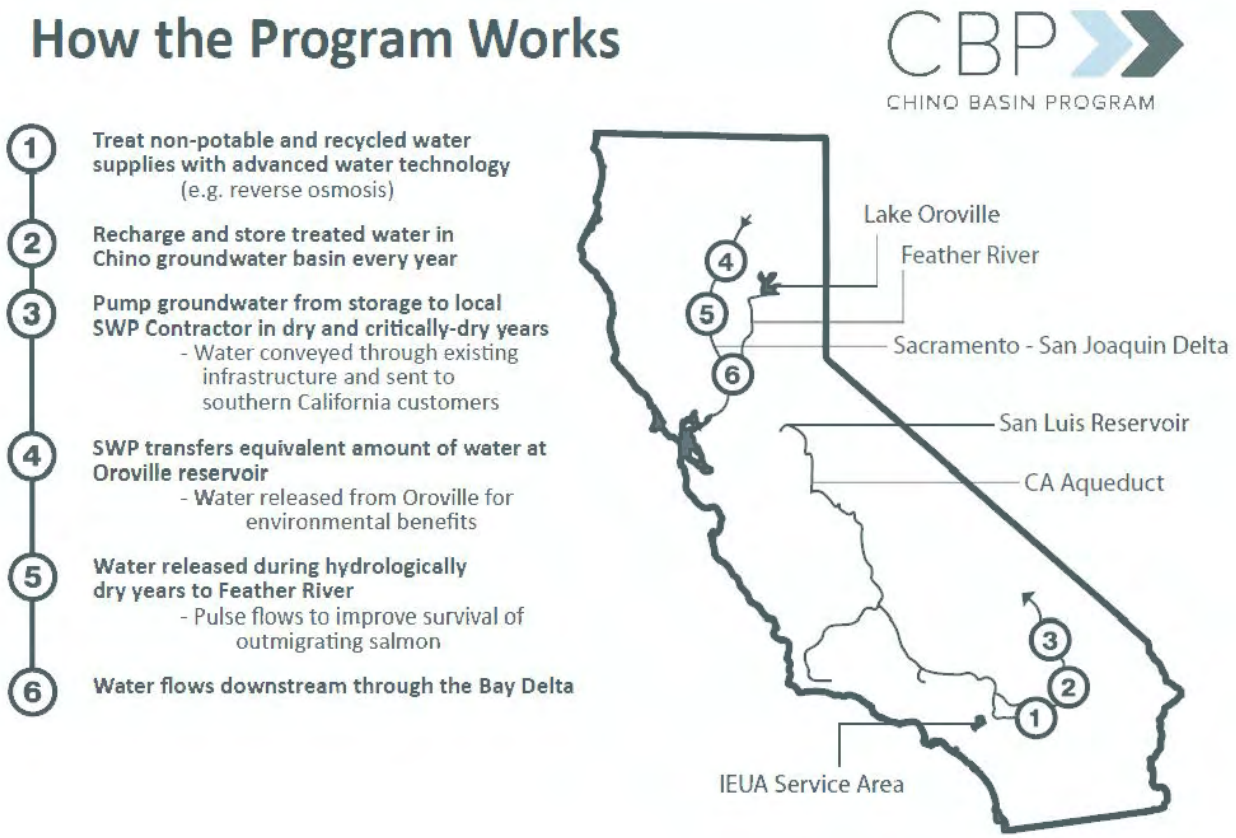
- on the north by the San Gabriel Mountains and the Cucamonga Basin;
- on the east by the Rialto-Colton Basin, Jurupa Hills, and the Pedley Hills;
- on the south by the La Sierra Hills and the Temescal Basin; and
- on the west by the Chino Hills, Puente Hills, and the Spadra, Pomona, and Claremont Basins.

The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Chino Basin is located near the intersection of Haven Avenue and

Mission Boulevard at Longitude 34.038040N, and Latitude 117.575954W. The majority of the infrastructure proposed as part of the CBP is proposed in the northern portion of the Basin, north of the Interstate 10 Freeway. The map provided in Exhibit 1 contains an overview of the proposed facilities and their general proposed locations as mapped within the Chino Basin and surrounding area.

PROJECT DESCRIPTION: The CBP was submitted for Proposition 1 – WSIP funding and was awarded $206.9M in conditional funding in July 2018. Under the WSIP, the CBP is proposed to be a 25-year conjunctive use project that proposes to use advanced water purification to treat and store up to 15,000 acre-feet per year (AFY) of recycled water in the Chino Basin and would extract the water during "call" years, which will likely be in dry seasons.

The proposed CBP is uniquely designed to deliver public benefits including a highly reliable, dedicated environmental water supply to benefit Bay-Delta instream flows, as well as enhance water supply reliability and improve water quality for water users in Southern California. The CBP would increase additional available groundwater supplies in the adjudicated Chino Basin through increased water recycling that would result from operation of a new advanced water purification facility (AWPF) and through groundwater storage by operation of new injection wells. The CBP would then dedicate a commensurate amount of water generated by the AWPF for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits (refer to the Exhibit below). IEUA's partner and the State Water Project Contractor that will facilitate the exchange for the CBP is Metropolitan Water District of Southern California (Metropolitan).



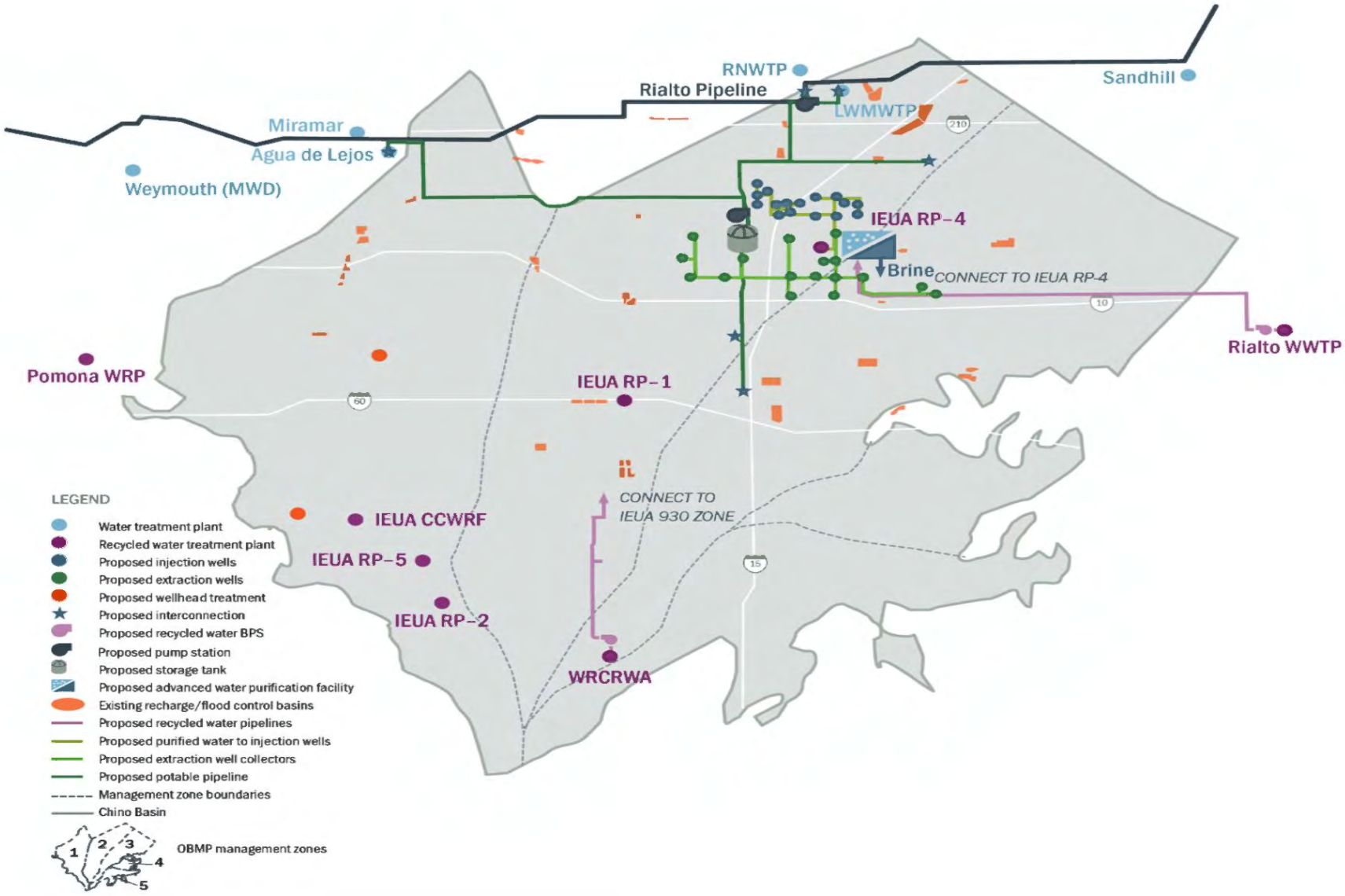

RNWTP
Rialto Pipeline
Sandhill
LWMWTP
Miramar
Agua de Lejos
Weymouth (MWD)
IEUA RP-4
Brine
CONNECT TO IEUA RP-4
Rialto WWTP
Pomona WRP
IEUA RP-1
CONNECT TO
IEUA 930 ZONE
IEUA CCWRF
IEUA RP-5
IEUA RP-2
WRCRWA
LEGEND
Water treatment plant
Recycled water treatment plant
Proposed injection wells
Proposed extraction wells
Proposed wellhead treatment
Proposed interconnection
Proposed recycled water BPS
Proposed pump station
Proposed storage tank
Proposed advanced water purification facility
Existing recharge/flood control basins
Proposed recycled water pipelines
Proposed purified water to injection wells
Proposed extraction well collectors
Proposed potable pipeline
Management zone boundaries
Chino Basin
1
2
3
4
5
OBMP management zones

EXHIBIT 1

The CBP would produce 15,000 AFY of new water supply for a period of 25-years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in hydrologically drier years when pulse flows in the Feather River would provide the most ecosystem benefit and other SWP operations would not be affected. The exchange would be administered through agreements with the DWR, the CDFW, Metropolitan, and other project partners.

Additionally, new water stored in the Chino Basin would also enhance emergency response water supply availability for IEUA and other participating agencies during crises such as flood or seismic events that disrupt imported water infrastructure. The infrastructure included in the CBP is consistent with infrastructure identified to reduce recycled water salinity for regulatory compliance as well as water infrastructure that has been identified through IEUA's Integrated Water Resources Plan (IRP) effort.

The program would rely on water transfer agreements through Metropolitan. For every acre-foot of water requested for north of the Delta ecosystem benefits, IEUA would pump locally stored groundwater and deliver it to Metropolitan or use the water locally instead of taking raw imported water from Metropolitan (referred to as "in lieu"). Metropolitan would then leave behind an equivalent amount of water in Lake Oroville to be dedicated and released for the requested ecosystem benefit. The CBP can be operated in a way to provide up to 50,000 AFY of water for up to 7.5 years, with a consecutive draw of no more than 3 years, of the 25-year program (up to 375,000 AF total) as long as the groundwater extraction does not exceed the approved borrow amount. This would result in balancing the PUTs (the components to recharge purified water to the Chino Basin) and TAKEs (the components to extract groundwater and convey potable water supply) to the Chino Basin at the end of the 25-year program, i.e., up to 375,000 AF would be recharged over 25 years and the same amount could be extracted over 25 years. The CBP includes two main categories of facilities: PUT and TAKE components. The PUT and TAKE components are summarized in the Table below.

SUMMARY OF PUT AND TAKE COMPONENTS

PUT Components	TAKE Components
• Tertiary recycled water supply and conveyance • Advanced water purification facility (AWPF) • Purified water pumping and conveyance • Groundwater recharge (injection wells and/or recharge basins)	• Groundwater extraction and treatment • Potable water pumping and conveyance • Potable water usage (Metropolitan pump back or in-lieu)

Ultimately, the CBP brings together these components cost-effectively and greatly enhances flexibility and resiliency to regional and local water operations, particularly during future extended droughts expected as climate change continues to impact California. The CBP's proposed AWPF, new injection and extraction facilities, conveyance facilities, and water system interconnections will allow more optimal management of local water supplies, including meeting water quality requirements for the continued use of recycled water within the Chino Basin, improved storage and recovery operations, as well as redundancies in water delivery infrastructure that will facilitate future rehabilitation and replacement of existing infrastructure.

Additionally, the CBP will provide up to 150,000 acre-feet (AF) of storage capacity in the Chino Groundwater Basin to be used for deposit of up to 15,000 AF of advanced treated water in each year for 25-years; this figure was calculated assuming that deposits or "PUTS" of water into the Basin would be withdrawn at varying "TAKE" rates, enabling additional water storage in the Basin up to 150,000 AF in total. As previously discussed, this stored water will be accessible for withdrawal at a maximum rate of 50,000 AFY when an ecosystem need arises. This requires an increase in the Safe Storage Capacity of the Chino Basin in order to accommodate an addition of up to 150,000 AF of managed storage above the existing Safe Storage Capacity (700,000 AF through June 30, 2030, and to 620,000 AF from July 1, 2030 through June 30, 2035).

As such, the CBP would contemplate a permanent increase in Safe Storage Capacity up to 850,000 AF in order to accommodate the CBP and after a 25-year period, the increased managed storage will be available for local use, therefore reducing dependence on imported water, improving water quality, and providing a new local water supply for the Chino Basin. This permanent increase would supersede the Safe Storage Capacity that was approved in March of 2021 by the IEUA Board and subsequently approved by the Chino Basin Watermaster in May 2021.

The following environmental issues will be analyzed in the EIR: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, energy, geology/soils, greenhouse gas emissions/climate change, hazards and hazardous materials, hydrology/water quality, land use/planning, mineral resources, noise, population/housing, public services, recreation, transportation, tribal cultural resources, utilities/service systems, and wildfire.

SCOPING MEETING: A public scoping meeting will be held to receive verbal public comments and suggestions on the environmental issues associated with implementation of the CBP that will be addressed in the EIR. It will include a brief presentation providing an overview of the facilities proposed in the CBP and the CEQA process. After the presentation, oral comments will be accepted. Written comment forms will be made available for those who wish to submit comments in writing at the scoping meeting. The scoping meeting will be open to the public and held at the following location:

Inland Empire Utility Agency
Agency Headquarters, Board Room
6075 Kimball Avenue, Building A, Chino, CA 91708
At 6:00 PM on October 6, 2021

THIRTY DAY COMMENT PERIOD: Pursuant to State CEQA Guidelines (Cal Code Regs., Title 14 para. 15000 *et seq.)* Section 15082(a), any response and/or comments to this NOP must be submitted to this office as soon as possible but **not later than thirty (30) days** after the date upon this Notice. The Notice of Preparation comment period begins on September 15, 2021 and ends on October 14, 2021.

This Notice of Preparation and Draft Project Description can be reviewed on the IEUA Website at https://www.ieua.org/read-our-reports/public-notices/

Please send your written responses to this Notice, including any comments you may have on this project, by 5:00 PM on October 14, 2021 via regular mail or e-mail to:

Ms. Sylvie Lee, P.E.
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CALIFORNIA AIR RESOURCES BOARD
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SACRAMENTO CA 95814

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL
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CHINO BASIN WATERMASTER
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CHINO HILLS CA 91709

CITY OF CLAREMONT
CITY MANAGER
ADAM PIRRIE
PO BOX 880
CLAREMONT CA 91711-0880

CITY OF EASTVALE
12363 LIMONITE AVENUE
SUITE 910
EASTVALE CA 91752

CITY OF FONTANA
CHUCK HAYS
16489 ORANGE WAY
FONTANA CA 92335

CITY OF FONTANA
MAY ATENCIO
16489 ORANGE WAY
FONTANA CA 92335

CITY OF JURUPA VALLEY
8930 LIMONITE AVENUE
JURUPA VALLEY CA 92509

CITY OF MONTCLAIR
EDWARD C STARR
5111 BENITO STREET
MONTCLAIR CA 91763

CITY OF NORCO
2870 CLARK AVENUE
NORCO CA 92860

CITY OF ONTARIO
SCOTT OCHOA
303 EAST "B" STREET
ONTARIO CA 91764

CITY OF POMONA
CITY MANAGER
JAMES MAKSHANOFF
CITY HALL – 2ND FLOOR
505 SOUTH GAREY AVENUE
POMONA CA 91766

CITY OF ONTARIO
MUNICIPAL UTILITIES COMPANY
SCOTT BURTON
1425 SOUTH BON VIEW AVENUE
ONTARIO CA 91761-4406

CITY OF ONTARIO
KATIE GIENGER PE
WATER RESOURCES MANAGER
1425 SOUTH BON VIEW AVENUE
ONTARIO CA 91761-4406

CITY OF RANCHO CUCAMONGA
JOHN GILLISON
10500 CIVIC CENTER DRIVE
RANCHO CUCAMONGA CA 91730

CITY OF UPLAND
CITY MANAGER
460 N EUCLID AVENUE
UPLAND CA 91786 4732

CALIFORNIA MILK PRODUCERS
ROB VANDENHEUVEL
13545 S EUCLID AVENUE, UNIT B
ONTARIO CA 91762

CUCAMONGA VALLEY WATER DISTRICT
JOHN BOSLER
10440 ASHFORD STFEET
RANCHO CUCAMONGA CA 91730

CUCAMONGA VALLEY WATER DISTRICT
EDUARDO ESPINOZA
10440 ASHFORD STREET
RANCHO CUCAMONGA CA 91730

FONTANA WATER COMPANY
JOSH SWIFT
15966 ARROW ROUTE
FONTANA CA 92335

INLAND EMPIRE RESOURCE CONSERVATION DISTRICT
MANDY PARKES
25864-K BUSINESS CENTER DRIVE
REDLANDS CA 92374

JURUPA COMMUNITY SERVICES DISTRICT
CHRIS BERCH
11201 HARREL STREET
JURUPA VALLEY CA 91752

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
PO BOX 54153
LOS ANGELES CA 90054-0153

MONTE VISTA WATER DISTRICT
JUSTIN SCOTT-COE
10575 CENTRAL AVENUE
MONTCLAIR CA 91763

ORANGE COUNTY
COUNTY EXECUTIVE OFFICER
FRANK KIM
HALL OF ADMNISTRATION
333 W SANTA ANA BLVD
SANTA ANA CA 92701

ORANGE COUNTY WATER DISTRICT
MICHAEL R MARKUS, GM
18700 WARD STREET
FOUNTAIN VALLEY CA 92708

REGIONAL WATER QUALITY CONTROL BOARD, SANTA ANA REGION
HOPE SMYTHE
3737 MAIN STREET, SUITE 500 RIVERSIDE
CA 92501-3348

RIVERSIDE COUNTY
CO EXECUTIVE OFFICER
JEFF VAN WAGENEN
PO BOX 512
RIVERSIDE CA 92502

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
JASON UHLEY
1995 MARKET STREET
RIVERSIDE CA 92501

SAN ANTONIO WATER COMPANY
BRIAN LEE
139 N EUCLID AVENUE
UPLAND CA 91786-6036

SAN BERNARDINO COUNTY FIRE DEPARTMENT
HAZARDOUS MATERIALS DIVISION
IONIE WALLACE
620 SOUTH "E" STREET
SAN BERNARDINO CA 92415-0153

SAN BERNARDINO COUNTY FLOOD CONTROL DISTRICT
KEVIN BLAKESLEE
825 EAST THIRD STREET
SAN BERNARDINO CA 92415

SAN BERNARDINO COUNTY LAND USE SERVICES DEPARTMENT
385 N ARROWHEAD AVENUE
SAN BERNARDINO CA 92415-0182

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT
HEATHER DYER
380 EAST VANDERBILT WAY
SAN BERNARDINO CA 92408

SAN GABRIEL VALLEY WATER COMPANY
11142 GARVEY AVENUE
EL MONTE CA 91733

SANTA ANA RIVER WATER COMPANY
10530 54TH STREET
MIRA LOMA CA 91752

SANTA ANA WATERSHED PROJECT AUTHORITY
RICHARD E HALLER
11615 STERLING AVENUE
RIVERSIDE CA 92503

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
PHILLIP FINE
21865 E COPLEY DRIVE
DIAMOND BAR CA 91765

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
EXECUTIVE DIRECTOR KOME AJISE
900 WILSHIRE BLVD SUITE 1700
LOS ANGELES CA 90017

SOUTHERN CALIFORNIA EDISON
JAMES PASMORE
2244 WALNUT GROVE AVENUE
ROSEMEAD CA 91770

STATE WATER CONTRACTORS
JENNIFER PIERRE, GENERAL MANAGER
1121 L STREET SUITE 1050
SACRAMENTO CA 95814

STATE WATER RESOURCES CONTROL BOARD
1001 “I” STREET
SACRAMENTO CA 95814

STATE WATER RESOURCES CONTROL BOARD DIVISION OF DRINKING WATER DISTRICT 13
SEAN MCCARTHY
464 W 4TH STREET ROOM 437
SAN BERNARDINO CA 92401

THREE VALLEYS MUNICIPAL WATER DISTRICT
MATTHEW LITCHFIELD
1021 E MIRAMAR AVENUE
CLAREMONT CA 91711-2052

US ARMY CORPS OF ENGINEERS
LOS ANGELES DISTRICT
915 WILSHIRE BLVD, SUITE 1101
LOS ANGELES CA 90017

US FISH & WILDLIFE SERVICE
2800 COTTAGE WAY, ROOM W-2606
SACRAMENTO CA 95825-1846

WATER FACILITIES AUTHORITY
1775 BENSON AVENUE
UPLAND CA 91784

WESTERN MUNICIPAL WATER DISTRICT
14205 MERIDIAN PARKWAY
RIVERSIDE CA 92518

WEST VALLEY WATER DISTRICT
GENERAL MANAGER
855 W BASE LINE ROAD
RIALTO CA 92376

APPENDIX 8.2

NOP COMMENT LETTERS

October 8, 2021

Inland Empire Utility Agency
Attn: Ms. Sylvie Lee
6075 Kimball Avenue
Chino, CA 91708

INLAND EMPIRE UTILITIES AGENCY (IEUA), NOTICE OF PREPARATION (NOP) FOR ENVIRONMENTAL IMPACT REPORT (EIR); INLAND EMPIRE UTILITIES CHINO BASIN PROGRAM PROJECT (PROJECT); SCH # 2021090310

Dear Ms. Lee:

Thank you for the opportunity to review the NOP prepared for the EIR for the proposed Project. The State Water Resources Control Board, Division of Drinking Water (State Water Board, DDW) is responsible for issuing water supply permits administered under the Safe Drinking Water Act and will require a new or amended water supply permit for the above referenced Project. A project requires a permit if it includes water system consolidation or changes to a water supply source, storage, or treatment or a waiver or alternative from Waterworks Standards (California Code of Regulations (CCR) title 22, chapter 16 et. seq).

The proposed Project will treat non-potable and recycled water supplies with advanced treatment to be stored in the Chino groundwater basin every year and pumped from the basin to the local State Water Project (SWP) contractor, Metropolitan Water District of Southern California (District). The water would be sent to IEUA members and other local water agencies during dry and critically dry years.

The treated water would be used in exchange for SWP supplies from Lake Oroville in Northern California, that would normally have been imported from the Sacramento-San Joaquin Delta and delivered to southern California. An equivalent amount of water would instead be transferred from the Oroville Reservoir and released in pulse flows on the Feather River during hydrologically dry periods, which will then flow downstream, through the Sacramento River watershed, and ultimately to the Sacramento-San Joaquin Delta (Bay Delta).

The Project will include construction of a advanced water purification facility, 16 injection wells, 17 extraction wells, four monitoring wells, a two and a half million gallon storage tank, a five million storage gallon tank, three pump stations, three transformers, groundwater treatment facilities, and a piping distribution network connecting the facilities to the District, IEUA members, and other local public water systems within San Bernardino County. Project piping will include 38.65 miles of eight to 72-inch diameter piping for water and brine conveyance. This piping will include a pipeline for the disposal of brine generated from the advanced water purification facility that will be connected to the existing Non-Reclaimable Wastewater System pipeline that transports brine to the Los Angeles County Sanitation Districts for treatment. The project will also include the use of nine existing IEUA member agency wells, the Agua De Lejos Water Treatment Plant Clearwell, and the Lloyd Michael Water Treatment Plant Clearwell.

The extraction well water would be chlorinated and pumped through 12-54-inch diameter piping to a new blending and storage reservoir. A newly installed regional pipeline would connect the portable water facilities through up to six,12-72-inch diameter turn outs to the member agencies. Some IEUA member agencies may also be provided with up to nine new wells or two to three wellhead treatment systems to existing active or off-line wells (in-lieu local), for up to a 6,000 acre-feet per year. In-lieu local water would then be pumped through IEUA member's existing conveyance structures.

17,000 acre-feet per year of recycled water would be treated at the constructed advanced water purification facility, resulting in 15,000 acre-feet of purified water that would be injected into the Chino Basin each year. This would create a new local water supply for the District, IEUA member agencies, and other local public water systems that can be used through agreements with Department of Water Resources, California Department of Fish and Wildlife, the District, and other project partners.

The Project will provide up to 50,000 acre-feet per year of water to be used in the Chino Basin during hydrologically drier years for up to three years and 375,000 acre-feet of water can be pumped from the Chino Basin over 25-years.

The Project will also provide water supplies for water improvements and emergency response benefits, including rehabilitation of the District's pipelines within their service area and protection against subsidence in the Chino Basin, and improved habitat conditions for native salmonids and other federally listed species with the Bay-Delta watershed.

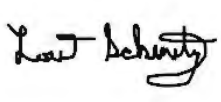
The State Water Board, DDW, as a responsible agency under CEQA, would like to see the following addressed in the EIR.

- A Project requires a State Water Board, DDW water supply permit or permit amendment if the Project includes water system consolidation or changes to a water supply source, storage, or treatment or a waiver or alternative from Waterworks Standards (CCR title 22, chapter 16 et. seq). The Project includes multiple water supply infrastructure components, including extraction wells, distribution reservoirs, interconnections, and wellhead treatment that typically require water supply permit amendments from the Division of Drinking Water. Please include a list of all the water systems within the Project, the water system's number, and water system components that will be added to each system that will trigger a drinking water supply permit amendment. Please also include a description of these new or modified components of the Project in enough detail to determine if a new water supply permit or permit amendment will be required.
- Please provide a Project site map that includes all new or modified water system components with the water system they belong to.
- Please include the State Water Resources Control Board, Division of Drinking Water, in any list of agencies that will be approving a permit, and the drinking water permit(s) mentioned under any list of permits needed.

Once the EIR is ready to be circulated for public review, please ensure that the State Water Board, Division of Drinking Water, Central District is notified. The State Water Board staff will review the draft EIR and provide additional comments, if necessary.

Please contact Terrence Kim of the Central District Office, at (818) 551-2029 or Terrence.Kim@waterboards.ca.gov if you have any questions regarding permitting requirements.

Sincerely,



Lori Schmitz
Environmental Scientist
Division of Financial Assistance
Special Project Review Unit
1001 I Street, 16th floor
Sacramento, CA 95814

Cc:

Office of Planning and Research, State Clearinghouse

Terry Kim
Associate Sanitary Engineer
Central District

STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Laura Miranda
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COMMISSIONER
Julie Tumamait-Stenslie
Chumash

COMMISSIONER
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Pomo

NAHC HEADQUARTERS
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nahc@nahc.ca.gov
NAHC.ca.gov

September 20, 2021

Sylvie Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Re: 2021090310, Inland Empire Utilities Agency Chino Basin Program Project, San Bernardino County

Dear Ms. Lee:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

a. A brief description of the project.

b. The lead agency contact information.

c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).

d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

a. Alternatives to the project.

b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

a. Type of environmental review necessary.

b. Significance of the tribal cultural resources.

c. Significance of the project's impacts on tribal cultural resources.

d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

a. Whether the proposed project has a significant impact on an identified tribal cultural resource.

b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

Main Office - 825 East Third Street, San Bernardino, CA 92415-0835 | Phone: 909.387.7910 Fax: 909.387.7911
www.SBCounty.gov

SAN BERNARDINO COUNTY

Department of Public Works
- Flood Control
- Operations
- Solid Waste Management
- Special Districts
- Surveyor
- Transportation

Brendon Biggs, M.S., P.E.
Director

David Doublet, M.S., P.E.
Assistant Director

Trevor Leja
Assistant Director

October 12, 2021 File: 10(ENV)-4.01

Inland Empire Utilities Agency
Attn: Ms. Sylvie Lee, P.E.
6075 Kimball Avenue
Chino, CA 91708
Tel: (909) 993-1600;
Email: Slee@ieua.org

Transmitted Via Email

RE: CEQA – NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CHINO BASIN PROGRAM

Dear Ms. Lee:

Thank you for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. **We received this request on September 28, 2021** and pursuant to our review, we have the following comments:

Flood Control Planning & Water Resources Division (Michael Fam, Chief, 909-387-8120):

1. We are aware there may be storm drains in and around the site that may be affected by the proposed Project. When planning for or altering existing or future storm drains, be advised that the Project is subject to the following District Comprehensive Storm Drain Plans (CSDP) and Master Plans of Drainage (MPD):

CSDP 1	CSDP 2
Rancho Cucamonga	Upland MPD
Chino Airport MSDP	Ontario MPD
Chino MPD	Chino Hills MPD
Chino Hills Area MPD	Montclair MPD
W. Cucamonga MPD	Fontana MPD

Any revision to the drainage should be reviewed and approved by the jurisdictional agency in which the revision occurs.

2. According to the most recent FEMA Flood Insurance Rate Map (FIRM), Panels 06071C7883H, 7915H, 8600H, 8605H, 8606H, 8607H, 8608H, 8615H, 8616H, 8629H, 8644H, 8651H, 8652 8654H, 8656H, 8657H, 8658H, 8659H, 8665H, 8666H, 8667H, 9330H, 9335H, 9345H, 9375H, dated August 28, 2008; 7895J, 863SJ, 8642J, dated September 26, 2014; 8609J, 8617J, 8628J, 8630J, 8636J, dated February 18, 2015; 7870J, 7890J, 8633J, 8637J, 8641J, 8653J, dated September 2, 2016; and 8634J, dated September 26, 2016, the Project lies within Zones D, A, AE, AO, AH, X-shaded (protected by a levee), X (unshaded), and the Regulatory Floodway. Impacts associated with the project's occurrence in the Flood Zones mentioned and mitigation, should be discussed within the Draft EA prior to adoption by the Lead Agency.

3. We recommend that the IEUA enforce, at a minimum, the most current FEMA regulations for construction within a Special Flood Hazard Area (SFHA) and coordinate the Project with the U.S. Army Corps. of Engineers within the Prado Dam Inundation area.

Permits/Operations Support Division (Sameh Basta, Chief, 909-387-7995):

1. The Projects boundaries include portions of San Bernardino County Flood Control District (SBCFCD) right-of-way and facilities. Be advised that any encroachments on the District's right-of-way or facilities, including but not limited to access, fencing and grading, utility crossings, landscaping, new and/or alteration to drainage connections will require a permit from the SBCFCD prior to start of construction. The necessity for permits, and any impacts associated with them, should be addressed in the Project environmental documents prior to adoption and certification. If you have any questions regarding this process, please contact the FCD Permit Section at (909) 387-1863

We respectfully request to be included on the circulation list for all project notices, public reviews, or public hearings. In closing, I would like to thank you again for allowing the San Bernardino County Department of Public Works the opportunity to comment on the above-referenced project. Should you have any questions or need additional clarification, please contact the individuals who provided the specific comment, as listed above.

Sincerely,

Michael Perry

MICHAEL R. PERRY
Supervising Planner
Environmental Management

MP:AJ:nl

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
Slee@ieua.org
Sylvia Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, California 91708

October 12, 2021

Notice of Preparation of a Draft Environmental Impact Report for the Inland Empire Utilities Agency Chino Basin Program

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. Our comments are recommendations on the analysis of potential air quality impacts from the Proposed Project that should be included in the Draft Environmental Impact Report (EIR). Please send a copy of the Draft EIR upon its completion and public release directly to South Coast AQMD as copies of the Draft EIR submitted to the State Clearinghouse are not forwarded. **In addition, please send all appendices and technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all emission calculation spreadsheets, and air quality modeling and health risk assessment input and output files (not PDF files). Any delays in providing all supporting documentation for our review will require additional review time beyond the end of the comment period.**

Responsible Agency and South Coast AQMD Permits

South Coast AQMD is a Responsible Agency for the Proposed Project (CEQA Guidelines Section 15381) since implementation of the Proposed Project requires permits from South Coast AQMD. It is important to note that the assumptions in the air quality analysis in the CEQA document will be used as the basis for evaluating the permits under CEQA and imposing permit conditions and limits. In order to ensure that impacts from the permits are fully and adequately evaluated as required under CEQA Guidelines Section 15096(b), it is recommended that the Lead Agency initiate consultation with South Coast AQMD.

CEQA Air Quality Analysis

Staff recommends that the Lead Agency use South Coast AQMD's CEQA Air Quality Handbook and website[1] as guidance when preparing the air quality and greenhouse gas analyses. It is also recommended that the Lead Agency use the CalEEMod[2] land use emissions software, which can estimate pollutant emissions from typical land use development and is the only software model maintained by the California Air Pollution Control Officers Association.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds[3] and localized significance thresholds (LSTs)[4] to determine the Proposed Project's air quality impacts. The

[1] South Coast AQMD's CEQA Handbook and other resources for preparing air quality analyses can be found at: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.
[2] CalEEMod is available free of charge at: www.caleemod.com.
[3] South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.
[4] South Coast AQMD's guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the Proposed Project and all air pollutant sources related to the Proposed Project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers and air pollution control devices), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA *operational* thresholds to determine the level of significance.

If the Proposed Project generates diesel emissions from long-term construction or attracts diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment[5].

Mitigation Measures

In the event that the Proposed Project results in significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize these impacts. Any impacts resulting from mitigation measures must also be analyzed. Several resources to assist the Lead Agency with identifying potential mitigation measures for the Proposed Project include South Coast AQMD's CEQA Air Quality Handbook[1], South Coast AQMD's Mitigation Monitoring and Reporting Plan for the 2016 Air Quality Management Plan[6], and Southern California Association of Government's Mitigation Monitoring and Reporting Plan for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy[7].

South Coast AQMD staff is available to work with the Lead Agency to ensure that air quality, greenhouse gas, and health risk impacts from the Proposed Project are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
SBC210921-08
Control Number

[5] South Coast AQMD's guidance for performing a mobile source health risk assessment can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.
[6] South Coast AQMD's 2016 Air Quality Management Plan can be found at: http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2017/2017-mar3-035.pdf (starting on page 86).
[7] Southern California Association of Governments' 2020-2045 RTP/SCS can be found at: https://www.connectsocal.org/Documents/PEIR/certified/Exhibit-A_ConnectSoCal_PEIR.pdf.

CITY OF ONTARIO
303 EAST B STREET | ONTARIO, CALIFORNIA 91764
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October 14, 2021

VIA EMAIL AND FIRST-CLASS MAIL
Slee@ieua.org
Ms. Sylvie Lee
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

SUBJECT: City of Ontario Comments on Notice of Preparation and Draft Project Description for the proposed Chino Basin Program

Dear Ms. Lee,

The Inland Empire Utilities Agency (IEUA) is acting as Lead Agency preparing an Environmental Impact Report (EIR) for the proposed Chino Basin Program (CBP or Project or Program). The IEUA released the Notice of Preparation and Draft Project Description on September 15, 2021 for review. The City of Ontario submits the following comments related to the Draft Project Description for the proposed CBP.

General Comments

The City of Ontario believes the Project Description is required to be revised to more accurately and completely describe the proposed Project to comply with CEQA. We propose that the Project Description include the following:

- Describe the proposed agency participation and financing for the Program. Expand on how it is anticipated the Program will be paid for at the local level.
- Describe the administration of performance criteria during a call year for participating agencies and non-participating agencies. This is to include any limitations on access to imported water for either participating or non-participating agencies.
- Identify the sources and supply of recycled water to be treated and pledged to the Program and including a description of the Project's compliance with participating agencies' Right of First Purchase of treated wastewater per the Regional Sewerage Contract.

Program Objectives

The Program Objectives are required to be revised to comply with CEQA and to ensure that the EIR evaluates a reasonable range of feasible alternatives that could achieve most of the project objectives. The CBP Project Description on page 3-13 defines program objectives designed to guide the development and implementation of the CBP. Ontario believes the program objectives need to be modified as shown in bold ***italics*** and ~~strikethrough~~ text below.

1. Meet permit compliance for the continued use of recycled water in the Chino Groundwater Basin.
2. Maintain commitments for salt management to sustain and enhance the safe yield for the Chino Groundwater Basin.
3. ~~Develop infrastructure that addresses long term supply vulnerabilities.~~ ***(Remove and replace with program objective #7)***
4. Provide a ***local*** source of water for emergency response during severe drought or catastrophic failure of imported water system's infrastructure.
5. Enhance recharge ***(injection wells and/or recharge basins)*** and/or reduce pumping in key locations to address subsidence in the Chino Groundwater Basin
6. Develop a~~n integrated~~ solution to produce ~~State and federal~~ environmental benefits ***by enhancing local supply and reducing reliance on imported water.***
7. ***Develop local water resources by utilizing recycled water locally in the Chino Groundwater Basin to meet the current and future needs of a growing region.***
8. ***Minimize the need for additional infrastructure by optimizing existing infrastructure***
9. ***Comply and be consistent with the Regional Sewerage Contract, including but not limited to compliance with each Contracting Agency's Right of First Purchase of treated wastewater.***

The population area served by the IEUA has grown quickly over the past ten years and is anticipated to continue to increase in the future. As projected in IEUA's UWMP, water demands are forecasted to increase by 33% over the next 25 years. In addition, the continuation of Chino Basin hydraulic control and reoperation will necessitate a new water replenishment demand of 40,000 acre-feet per year starting in about 2025. The region's growth and groundwater basin management plans emphasize the need for prudent water resources planning and management to secure the region's long term water supplies.

Program Alternatives Analysis

Section 15126.6 of the CEQA Guidelines require that an EIR analyze a reasonable range of feasible alternatives to the project that meet most of the project objectives. The range of feasible alternatives is required to focus on alternatives that may reduce the potential significant effects of the proposed project. CEQA requires the alternatives to be evaluated at the same level of detail as the proposed project to comply with CEQA informational standards and to allow the public to provide informed comments on project alternatives.

Conceptually, the City of Ontario proposes there be an alternative defined as the Local Control & Supply Alternative (Local Alternative) that evaluates treating and injecting currently underutilized recycled water into the Chino Groundwater Basin (Basin) for local use with no export or in-lieu elements. The Local Alternative would include the following essential components.

- Make beneficial use of recycled water currently being discharged to the Santa Ana River.
- Develop a local supply by advance treating recycled water which would be available to agencies in any given year, enabling the agencies to reduce reliance on imported water.
- Provide purified water pumping and conveyance for groundwater injection (injection wells and/or recharge basins).
- Implement and be consistent with the rights of contracting parties pursuant to the Regional Sewage Contract.

The proposed Local Alternative does not include the TAKE components of the proposed CBP. Below are the elements of the CBP which will not be included in the Local Alternative.

- Groundwater extraction and treatment
- Potable water pumping and conveyance
- Potable water usage (MWD pump back or in-lieu)

The Local Alternative would be comprised of only PUT components with participating agencies extracting the advanced treated water from the Basin with their existing or future facilities and/or for use in meeting Desalter Replenishment obligations. The participating agencies would store the advanced treated water in their respective storage accounts in the Basin.

Closing

As the region continues to grow and develop it is vital to maximize the use of available local water resources to ensure a safe and reliable water supply is accessible for the region. The City appreciates your attention to the items identified herein and looks forward to working collaboratively with your team.

Sincerely,

Scott Burton, P.E.
Utilities General Manager

C: Scott Burton, Utilities General Manager, City of Ontario
Shivaji Deshmukh, General Manager, Inland Empire Utilities Agency
Fred Fudacz, Partner Nossaman LLP
Robert Thornton, Partner Nossaman LLP

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Blvd., Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

October 14, 2021
Sent via email

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708
Email: Slee@ieua.org

Subject: Notice of Preparation of a Draft Environmental Impact Report for the Chino Basin Program (State Clearinghouse Number: 2021090310)

Dear Ms. Lee:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (EIR) from the Inland Empire Utilities Agency (IEUA) for the Chino Basin Program (Program) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those projects and activities involved in the Program that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Program that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's Trustee Agency for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

1 CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW will need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Program may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Program as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Program proponent may seek related take authorization as provided by the Fish and Game Code.

PROJECT DESCRIPTION SUMMARY

The California Water Commission (Commission) is administering the Water Storage Investment Program (WSIP) to fund the public benefits associated with water storage. Through a rigorous selection process, the Commission made maximum conditional eligibility determinations (MCEDs), which is the amount of Proposition 1 funding available to be given to a project or program, that collectively would boost California's water storage capacity by 2.77 million acre-feet. Of the seven MCEDs, the Program was chosen for its public benefits, which consisted of ecosystem improvements, water quality improvements, and emergency response.

The proposed Program is designed to deliver public benefits including a reliable, dedicated environmental water supply to benefit Bay-Delta instream flows, as well as enhance water supply reliability and improve water quality for water users in Southern California. The Program would increase additional available groundwater supplies in the Chino Basin through increased water recycling that would result from operation of a new advanced water purification facility (AWPF) and through groundwater storage by operation of new injection wells. The Program would then dedicate a commensurate amount of water generated by the AWPF for Chino Basin use to provide for an exchange of State Water Project supplies in Lake Oroville in northern California that would otherwise be delivered to southern California. The additional Lake Oroville water would subsequently be released in the form of pulse flows in the Feather River to improve habitat conditions for native salmonids and achieve environmental benefits.

To date, a MCED has been issued for the Program, also referred to as the Chino Basin Conjunctive Use Environmental Water Storage/Exchange Program (CBEWP), for $206.9M. Proposition 1 includes a statutory deadline of January 1, 2022, by which a feasibility study, draft environmental documentation, and commitments for at least 75 percent of the non-public benefit cost share must be completed.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist IEUA in adequately identifying and/or mitigating the Program's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. CDFW recognizes that a

programmatic EIR need not be as detailed as CEQA documents prepared for specific projects that may follow (CEQA Guidelines § 15146). CDFW also recognizes that the level of detail should be reflective of the level contained in the Program or Program element being considered (Rio Vista Farm Bureau Center v. County of Solano (1992) 5 Cal.App.4th 351). However, please note that IEUA cannot defer the analysis of significant effects of the EIR to later-tiered CEQA documents (Stanislaus Natural Heritage Project v. County of Stanislaus (1996) 48 Cal.App.4th 182).

CDFW recommends that the forthcoming EIR address the following:

Assessment of Biological Resources

Section 15125(c) of the CEQA Guidelines states that knowledge of the regional setting of a project/program is critical to the assessment of environmental impacts and that special emphasis should be placed on environmental resources that are rare or unique to the region. To enable CDFW staff to adequately review and comment on the Program, the EIR should include a complete assessment of the flora and fauna within and adjacent to the any projects or activities within the Program, with particular emphasis on identifying rare, threatened, endangered, and other sensitive species and their associated habitats.

The CDFW recommends that the EIR specifically include:

1. An assessment of the various habitat types, and a map that identifies the location of each habitat type. CDFW recommends that floristic, alliance- and/or association-based mapping and assessment be completed following *The Manual of California Vegetation*, second edition (Sawyer et al. 2009). Adjoining habitat areas should also be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

2. A general biological inventory of the fish, amphibian, reptile, bird, and mammal species that are present or have the potential to be present within each habitat type onsite and within adjacent areas that could be affected. CDFW's California Natural Diversity Database (CNDDB) in Sacramento should be contacted at (916) 322-2493 or CNDDB@wildlife.ca.gov to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

   Please note that CDFW's CNDDB is not exhaustive in terms of the data it houses, nor is it an absence database. CDFW recommends that it be used as a starting point in gathering information about the *potential presence* of species within the general area.

3. A complete, *recent* inventory of rare, threatened, endangered, and other sensitive species within, as well as any offsite areas with the potential to be affected, including California Species of Special Concern (CSSC) and California Fully Protected Species (Fish and Game Code § 3511). Species to be addressed should include all those

which meet the CEQA definition (CEQA Guidelines § 15380). The inventory should address seasonal variations in use and should not be limited to resident species. Focused species-specific surveys, completed by a qualified biologist and conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with CDFW and the U.S. Fish and Wildlife Service, where necessary. Note that CDFW generally considers biological field assessments for wildlife to be valid for a one-year period, and assessments for rare plants may be considered valid for a period of up to three years. Some aspects may warrant periodic updated surveys for certain sensitive taxa, particularly if any projects or activities are proposed to occur over a protracted time frame, or in phases, or if surveys are completed during periods of drought.

Analysis of Direct, Indirect, and Cumulative Impacts to Biological Resources

CDFW recognizes the importance of boosting California's water storage and providing ecological benefits to the State Water Project. CDFW would like to understand the impacts to the Chino Basin and the mitigation that will occur to offset these impacts to the local Santa Ana River Watershed.

The jurisdiction of the Chino Basin spans approximately 2,800 square miles and encompasses much of Orange County, a sliver of Los Angeles County, and the major population centers of western Riverside and southwestern San Bernardino Counties. Production and storage rights in the Chino Basin are defined in a Stipulated Judgment (Judgment), issued in 1978 (Chino Basin Municipal Water District vs. the City of Chino et al. [SBSC Case No. RCV 51010]). Since that time, the basin has been managed, as required by the Judgment, under the direction of a court appointed Chino Basin Watermaster (CBWM). A fundamental premise of the Judgment is that all Chino Basin water users are allowed to pump sufficient water from the basin to meet their requirements. To the extent that pumping by a party exceeds its share of the safe yield, assessments are levied by CBWM to replace overproduction. The Judgment recognizes that there exists a substantial amount of available unused groundwater storage capacity space in the Chino Basin that can be utilized for storage and the conjunctive use of supplemental and basin waters, makes utilization of this storage subject to CBWM control and regulation, and provides that any person or public entity, whether or not a party to the Judgment, may make reasonable beneficial use of the available storage, provided that no such use shall be made except pursuant to a written storage agreement with CBWM.

Groundwater adjudication is fundamentally not about the sustainable management of a groundwater basin; rather, it is about the court addressing a controversy between parties about a "problem" in the basin and designating who should be responsible for providing a solution. Controversies can include whether the basin is in overdraft; who has a right to water in the basin; how much water can actually be withdrawn by the parties- - individually and collectively; who should be responsible for providing or paying for sufficient water for

future growth; and how overdraft and safe yield should be defined and calculated (https://www.waterboards.ca.gov/water_issues/programs/gmp/docs/resources/swrcb_012816.pdf). As acknowledged in Senate Bill 226 and Assembly Bill 1390 (2015), adjudication is rarely about the full spectrum of requirements for sustainable management over the long term. Also, because withdrawal rights are often determined relative to a previous base period of pumping, there may be a disproportionate reliance on imported water, and imported water is generally included in determinations of allowable extractions. For this reason, CDFW strongly encourages that future climate or demographic changes that will affect the sustainable management of a groundwater basin, as well as environmental uses and the hydrologic links between surface and groundwater be incorporated.

There are dozens of groundwater basins in the Santa Ana River watershed that play a pivotal role, and each requires careful planning and monitoring. CBWM developed an Optimum Basin Management Program (OBMP) with an accompanying Programmatic EIR (PEIR; July 2000) that described the physical state of the groundwater basin and defined a set of management goals and actions. Agreements to implement the OBMP (termed 'Peace I Agreement' and 'Peace II Agreement'), and their associated CEQA analysis (Peace II SEIR, 2010; SEIR amendment, 2017) were also approved. The management activities, and associated objectives and tasks defined in the OBMP, have been retained in an updated Optimum Basin Management Program Update Draft Subsequent Environmental Impact Report (OBMPU SEIR March 2020; State Clearinghouse No. 200041047). In the OBMPU SEIR comments, CDFW tried to elaborate on the idea that indirect, direct, and cumulative impacts should be addressed not only for the construction and maintenance of those facilities, but rather, for the effects associated with surface-water interconnections, groundwater sustainable ecosystems, and other potential deleterious effects throughout the entire Chino Basin. For CDFW comments and the IEUA response to the OMMPU SEIR, please refer to the attached exhibit.

Most of the responses to CDFW's concerns focused on the lack of known details regarding specific projects, and that second-tier CEQA evaluations would occur. Further, the response comments clarified that:

> "*A second-tier CEQA evaluation, which will enable further collaboration with CDFW and other agencies where a specific project is being proposed, such that tangible mitigation and adaptive management can be developed. As such proposals are developed, more detailed analyses will be able to incorporate the data from the Upper Santa Ana Watershed HCP and other studies conducted specifically for proposed diversions, enabling a greater range of data from which to develop adaptive management strategies*….
>
> *In addition, MM BIO-25 commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP) and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects. At this time, no specific diversions in the Chino Basin have been proposed, and*

proposals being considered in other portions of the Upper Santa Ana River Watershed have not yet been collectively identified. Based on communications with Valley District, the HCP EIR should be available in the near future, and the published data can then be used in conjunction with any future proposal in the Chino Basin to divert surface water, unless they are already included in the Santa Ana River HCP EIR".

As the Lead Agency, IEUA should be aware that cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of project-specific impacts (CEQA Guidelines section 15130(b)). Further, CEQA Guidelines section 15130(b) presents two approaches for identifying the relevant cumulative projects to include in the cumulative analysis in an EIR: (1) A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the lead agency; or (2) A summary of projections contained in an adopted local, regional, or Statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect. CDFW recommends that the EIR utilize a hybrid approach, with a list of past, present, and probable future projects/activities being considered in combination with baseline conditions, projections, and adopted planning documents.

Pursuant to the Mitigation Measure 4.4-3 of the Peace II Subsequent Environmental Impact Report (SEIR), CBWM and IEUA must implement an Adaptive Management Plan (AMP) as a contingency measure to ensure that the riparian habitat in the Prado Basin will not incur significant adverse impacts. Specifically, Mitigation Measure 4.4-3 states: *"IEUA, Watermaster [CBWM], OCWD and individual stakeholders, that choose to participate, will jointly fund and develop an adaptive management program that will include, but not be limited to: monitoring riparian habitat quality and extent; investigating and identifying essential factors to long-term sustainability of Prado Basin riparian habitat; identification of specific parameters that can be monitored to measure potential effects of Peace II Agreement implementation effects on Prado Basin; and identification of water management options to minimize the Peace II Agreement effects on Prado Basin. This adaptive management program will be prepared as a contingency to define available management actions by Prado Basin stakeholders to address unforeseeable significant adverse impacts, as well as to contribute to the long-term sustainability of the Prado Basin riparian habitat."*

To achieve this, there has been ongoing collection of data within the Chino and surrounding basins. Since 2015, annual data analysis and reporting has occurred as identified in the PBHSP AMP (Wildermuth Environmental Technical Memorandum, February 25, 2020) that includes the following below.

For groundwater:

- Water-level measurements every 15 minutes at sixteen monitoring wells, plus monitoring wells HCMP-5/1 and RP3-MW3, using integrated pressure-transducers/data-loggers.
- Quarterly groundwater samples (2015-2018) from the 18 PBHSP monitoring wells and analyzed groundwater-level data, model-generated groundwater-flow directions, and surface-water quality and flow data to help characterize groundwater/surface-water interactions in the Prado Basin.
- Monitoring high-frequency data (2018/19) at four monitoring wells at two locations along Chino Creek (PB-7 and PB-8).

For surface-water discharge:

- Data from the Santa Ana River and the tributaries that cross Prado Basin to characterize the influence of surface-water discharge on the riparian habitat utilizing publicly-available data sets : the USGS daily discharge measurements at six sites along the Santa Ana River and its tributaries; daily discharge and water-quality data from Publicly-Owned Treatment Works (POTWs) that are tributary to Prado Basin; US Army Corps of Engineers (ACOE) daily measurements of reservoir elevation and releases from the reservoir at Prado Dam; and CBWM quarterly surface-water-quality monitoring at two sites along the Santa Ana River.

For riparian habitat:

- Mapping and analysis of the riparian habitat using (i) air photos and (ii) the normalized distribution vegetation index (NDVI) derived from the Landsat remote-sensing program.
- Site-specific monitoring of the riparian habitat consisting of periodic field surveys of the riparian vegetation at selected locations (once every three years).

In response to CDFW comments on the OBMPU SEIR, it was argued that "*as of this time, no adverse effects have been identified through monitoring within the PBHS, and as such, no adaptive management actions have been taken as a result. IEUA and Watermaster [CBWM] are open to discuss "adaptive management" options on a watershed-wide basis with the commenter and any other interested parties under the supervision of the Prado Basin Habitat Sustainability Committee in a collaborative manner*". However, as was pointed out in the CDFW OMBPU comments, and inaccurately characterized in the IEUA response, the PBHS has produced a time series of data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both regional mapping using multi-spectral remote-sensing data and air photos. In particular, the 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference

vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are “losing reaches” characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are “gaining reaches” characterized by groundwater discharge. CDFW again urges that this, along with other available data, be used to analyze the potential cumulative impacts of the Program.

CDFW is aware of several plans and documents that have been generated to provide for a more sustainable watershed. In 2005, agencies successfully formed the USARW Integrated Regional Water Management Region (IRWM Region or Region) and developed an integrated plan for managing water resources in the Region. The Chino Creek Integrated Plan (CCIP), updated in September 2006, was prepared for the IEUA and Orange County Water District (OCWD) under a grant from the State Water Resource Control Board and identifies key problem areas in the lower Chino Creek watershed, recommends projects and measures that will improve water quality, flood control, and water conservation, and addresses the need for stormwater management (i.e., advising that RP-2 be converted to a stormwater treatment facility). The general function of the CCIP focused on planning attention on the lower Chino Creek area of the Prado Basin in a process of preserving and restoring the Prado Basin and to maximize its value to the community, which resulted in the USARW Integrated Regional Water Management Plan (IRWM Plan) being created. The 2014 IRWM Plan incorporates information describing the Region, goals and objectives, evaluates strategies, and develops a process for future implementation.

The USARW Region contains extraordinary natural resources, including the Santa Ana River and its tributaries, that provide habitat to riparian and aquatic species, and provide connectivity to upland habitats. The importance of the Region’s habitats is underscored by the multiple environmental and ecological management plans currently in place, including the Western Riverside County Multispecies Habitat Conservation Plan, Upper Santa Ana Wash Land Management and Habitat Conservation Plan, and Upper Santa Ana River Habitat Conservation Plan. Recognizing the vast ecological value, the agencies in the Region created the Basin Technical Advisory Committee (BTAC) to facilitate implementation of the IRWM Plan. The BTAC evaluated the vulnerability of the IRWM Region’s resources to climate change impacts and identified several vulnerabilities associated with these impacts, including additional imported water supply uncertainty, additional potential challenges to capturing stormwater during more intense storms, water quality impacts due to more frequent and intense wildfires, degraded water quality and aquatic habitat impacts due to higher temperatures, flood system impacts due to more intense storms, and increased irrigation demand due to higher temperatures. CDFW recommends that IEUA utilize the BTAC findings and continue to collaborate to ensure groundwater and surface water impacts are adequately evaluated and considered.

Finally, the Santa Ana Watershed Project Authority (SAWPA), which was formed in 1968 as a joint power authority under California law, is composed of a five-agency membership: IEUA, OCWD, San Bernardino Valley Municipal Water District (SBVMWD), Eastern Municipal Water District (EMWD), and Western Municipal Water District (WMWD). SAWPA recognized the need for a common method of measuring progress on meeting the goals and objectives, as well as the health of the Santa Ana River Watershed, by focusing on a broad range of water resource issues (water supply reliability, water quality improvement, recycled water, wastewater treatment, groundwater management, and brine disposal). SAWPA works closely with several sub-regional IRWM planning efforts and supports watershed sustainability through the One Water One Watershed (OWOW) Program, which is part of the DWR's IRWP. Some notable goals, objectives, and performance monitoring are included in an attachment (refer to table). CDFW asks that IEUA keep these in mind when preparing the EIR.

Alternatives Analysis

CDFW recommends the EIR describe and analyze a range of reasonable alternatives to the Project that are potentially feasible, would "feasibly attain most of the basic objectives of the Project," and would avoid or substantially lessen any of the Project's significant effects (CEQA Guidelines § 15126.6[a]). The alternatives analysis should also evaluate a "no project" alternative (CEQA Guidelines § 15126.6[e]). The no Project alternative should evaluate how the changing environment, such as climate change and drought, may affect the community if a new or revised general plan were not adopted.

Mitigation Measures for Project Impacts to Biological Resources

The EIR should identify mitigation measures and alternatives that are appropriate and adequate to avoid or minimize potential impacts, to the extent feasible. IEUA should assess all direct, indirect, and cumulative impacts that are expected to occur as a result of the implementation of the Program and its long-term operation and maintenance. When proposing measures to avoid, minimize, or mitigate impacts, CDFW recommends consideration of the following:

1. *Fully Protected Species*: Fully protected species may not be taken or possessed at any time. The EIR should be designed to completely avoid any fully protected species that have the potential to be present within or adjacent to any project or activity within the Program. CDFW also recommends that the EIR fully analyze potential adverse impacts to fully protected species due to habitat modification, loss of foraging habitat, and/or interruption of migratory and breeding behaviors. CDFW recommends that the Lead Agency include in the analysis how appropriate avoidance, minimization, and mitigation measures will reduce indirect impacts to fully protected species.

2. *Sensitive Plant Communities*: CDFW considers sensitive plant communities to be imperiled habitats having both local and regional significance. Plant communities, alliances, and associations with a statewide ranking of S-1, S-2, S-3, and S-4 should

be considered sensitive and declining at the local and regional level. These ranks can be obtained by querying the CNDDB and are included in *The Manual of California Vegetation* (Sawyer et al. 2009). The EIR should include measures to fully avoid and otherwise protect sensitive plant communities from direct and indirect impacts.

3. *California Species of Special Concern* (CSSC): CSSC status applies to animals generally not listed under the federal Endangered Species Act or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. CSSCs should be considered during the environmental review process.

4. *Mitigation*: CDFW considers adverse impacts to sensitive species and habitats to be significant to both local and regional ecosystems, and the EIR should include mitigation measures for these adverse impacts. Mitigation measures should emphasize avoidance and reduction of impacts. For unavoidable impacts, onsite habitat restoration and/or enhancement, and preservation should be evaluated and discussed in detail. Where habitat preservation is not available onsite, offsite land acquisition, management, and preservation should be evaluated and discussed in detail.

   The EIR should include measures to perpetually protect the targeted habitat values within mitigation areas from direct and indirect adverse impacts in order to meet mitigation objectives to offset project-induced qualitative and quantitative losses of biological values. Specific issues that should be addressed include restrictions on access, proposed land dedications, long-term monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

   If sensitive species and/or their habitat may be impacted, CDFW recommends the inclusion of specific mitigation in the EIR. CEQA Guidelines section 15126.4, subdivision (a)(1)(8) states that formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after each project/activity approval. Courts have also repeatedly not supported conclusions that impacts are mitigable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrieta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777).

   CDFW recommends that the EIR specify mitigation that is roughly proportional to the level of impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). The mitigation should provide long-term conservation value for the suite of species and habitat being impacted by the Project.

Furthermore, in order for mitigation measures to be effective, they need to be specific, enforceable, and feasible actions that will improve environmental conditions.

5. *Habitat Revegetation/Restoration Plans*: Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant restoration techniques. Plans should identify the assumptions used to develop the proposed restoration strategy. Each plan should include, at a minimum: (a) the location of restoration sites and assessment of appropriate reference sites; (b) the plant species to be used, sources of local propagules, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) a local seed and cuttings and planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity. Monitoring of restoration areas should extend across a sufficient time frame to ensure that the new habitat is established, self-sustaining, and capable of surviving drought.

   CDFW recommends that local onsite propagules from the area to be disturbed and/or the nearby vicinity be collected and used for restoration purposes. Onsite seed collection should be initiated in order to accumulate sufficient propagule material for subsequent use in future years. Onsite vegetation mapping at the alliance and/or association level should be used to develop appropriate restoration goals and local plant palettes. Reference areas should be identified to help guide restoration efforts. Specific restoration plans should be developed for various project components as appropriate.

   Restoration objectives should include protecting special habitat elements or re-creating them in areas affected by the Project; examples could include retention of woody material, logs, snags, rocks, and brush piles.

6. *Nesting Birds and Migratory Bird Treaty Act:* Please note that it is the Project proponent's responsibility to comply with all applicable laws related to nesting birds and birds of prey. Fish and Game Code sections 3503, 3503.5, and 3513 afford protective measures as follows: Fish and Game Code section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by Fish and Game Code or any regulation made pursuant thereto. Fish and Game Code section 3503.5 makes it unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by Fish and Game Code or any regulation adopted pursuant thereto. Fish and Game Code section 3513 makes it unlawful to take or possess any migratory nongame bird except as provided by the rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. § 703 et seq.).

CDFW recommends that the EIR include the results of avian surveys, as well as specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur. Project-specific avoidance and minimization measures may include, but not be limited to: project phasing and timing, monitoring of project-related noise (where applicable), sound walls, and buffers, where appropriate. The SEIR should also include specific avoidance and minimization measures that will be implemented should a nest be located within the project site. If pre-construction surveys are proposed in the EIR, the CDFW recommends that they be required no more than three (3) days prior to vegetation clearing or ground disturbance activities, as instances of nesting could be missed if surveys are conducted sooner.

7. *Moving out of Harm's Way:* To avoid direct mortality, CDFW recommends that the lead agency condition the EIR to require that a CDFW-approved qualified biologist be retained to be onsite prior to and during all ground- and habitat-disturbing activities to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities. Movement of wildlife out of harm's way should be limited to only those individuals that would otherwise by injured or killed, and individuals should be moved only as far a necessary to ensure their safety (i.e., CDFW does not recommend relocation to other areas). Furthermore, it should be noted that the temporary relocation of onsite wildlife does not constitute effective mitigation for the purposes of offsetting project impacts associated with habitat loss.

8. *Translocation of Species*: CDFW generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species as studies have shown that these efforts are experimental in nature and largely unsuccessful.

California Endangered Species Act

CDFW is responsible for ensuring appropriate conservation of fish and wildlife resources including threatened, endangered, and/or candidate plant and animal species, pursuant to CESA. CDFW recommends that a CESA Incidental Take Permit (ITP) be obtained if the Project has the potential to result in "take" (California Fish and Game Code Section 86 defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") of State-listed CESA species, either through construction or over the life of the project. CESA identifies it is the policy of the state to conserve, protect, enhance, and restore State-listed CESA species and their habitats. CDFW encourages early consultation, as significant modification to the proposed Project and avoidance, minimization, and mitigation measures may be necessary to obtain a CESA ITP. CDFW must comply with CEQA for issuance of a CESA ITP. CDFW therefore recommends that the SEIR addresses all Project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of CESA.

Lake and Streambed Alteration Program

Fish and Game Code section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following: Substantially divert or obstruct the natural flow of any river, stream or lake; Substantially change or use any material from the bed, channel or bank of any river, stream, or lake; or Deposit debris, waste or other materials that could pass into any river, stream or lake. Please note that "any river, stream or lake" includes those that are episodic (i.e., those that are dry for periods of time) as well as those that are perennial (i.e., those that flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

Upon receipt of a complete notification, CDFW determines if the proposed Project activities may substantially adversely affect existing fish and wildlife resources and whether a Lake and Streambed Alteration (LSA) Agreement is required. An LSA Agreement includes measures necessary to protect existing fish and wildlife resources. CDFW may suggest ways to modify your Project that would eliminate or reduce harmful impacts to fish and wildlife resources.

CDFW's issuance of an LSA Agreement is a "project" subject to CEQA (see Pub. Resources Code 21065). To facilitate issuance of an LSA Agreement, if necessary, the SEIR should fully identify the potential impacts to the lake, stream, or riparian resources, and provide adequate avoidance, mitigation, and monitoring and reporting commitments. Early consultation with CDFW is recommended, since modification of the proposed Project may be required to avoid or reduce impacts to fish and wildlife resources. To obtain a Lake or Streambed Alteration notification package, please go to https://www.wildlife.ca.gov/Conservation/LSA/Forms.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

To ameliorate the water demands of this Project, CDFW recommends incorporation of water-wise concepts in project landscape design plans. In particular, CDFW recommends xeriscaping with locally native California species, and installing water-efficient and targeted irrigation systems (such as drip irrigation). Local water agencies/districts, and resource conservation districts in your area may be able to provide information on plant nurseries that carry locally native species, and some facilities display drought-tolerant locally native species demonstration gardens (for example the Riverside-Corona Resource Conservation District in Riverside). Information on drought-tolerant landscaping and water-efficient irrigation systems is available on California's Save our Water website: http://saveourwater.com/what-you-can-do/tips/landscaping/

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e).)

Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). Information can be submitted online or via completion of the CNDDB field survey form at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be mailed electronically to CNDDB at the following email address: CNDDB@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP of a EIR for the Chino Basin Program and recommends that IEUA address the CDFW's comments and concerns in the forthcoming EIR. If you should have any questions pertaining to the comments provided in this letter, please contact Kim Romich, Senior Environmental Scientist, Specialist, at (760) 937-1380 or at kimberly.romich@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Scott Wilson
8091B1A9242F49C...

Scott Wilson
Environmental Program Manager

Attachments:

Table 1 The goals, objectives, and performance monitoring contained within the Santa Ana Watershed Project Authority One Water One Watershed Program

Exhibit 1 CDFW Comment Letter (May 2020) for the OBMPU SEIR

ec: Kim Freeburn, Senior Environmental Scientist, Supervisor
Inland Deserts Region
kim.freeburn@wildlife.ca.gov

HCPB CEQA Coordinator
Habitat Conservation Planning Branch

Office of Planning and Research, State Clearinghouse, Sacramento
state.clearinghouse@opr.ca.gov

Table 1

The goals, objectives, and performance monitoring contained within the Santa Ana Watershed Project Authority One Water One Watershed Program.

	Goal	Objectives	Performance Criteria (2010-2035)
Water Supply	Approximately 70% of the supply is of local origin coming from local groundwater, local precipitation and surface flows, and recycled water Maintain reliable and resilient water supplies and reduce dependency on imported water	• Decrease water demand • Increase water-use efficiency • Increase use of rainfall and snowpack as a resource • Increase use of recycled water • Sustainably develop local water resources • Maintain sufficient storage to overcome multi-year (3 year) drought over a ten year hydrologic cycle	•Conserve an additional 256,500 AFY of water through water use efficiency and conservation measures •Create 58,000 AFY using a combination of additional wells, treatment, conjunctive use storage and desalination of brackish groundwater •Increase production of recycled water by 157,000 AFY •Increase both centralized and distributed stormwater capture and recharge by 132,000 AFY •Develop 54,000 AFY of ocean water desalination
Hydrology	Manage at the watershed scale for preservation and enhancement of the natural hydrology to benefit human and natural communities.	• Preserve and restore hydrologic function of forested and other lands • Preserve and restore hydrogeomorphic function of streams and water bodies • Safely co-manage flood protection and water conservation • Include ecosystem function in new development planning and construction	Reduce flood risk in 700 acres using integrated flood management approaches •Remove 500,000 cubic yards of sediment from debris basins and reservoirs
Open Space	Preserve and enhance the ecosystem services provided by open space and habitat within the watershed.	• Increase the capacity of open space to provide recreational opportunities without degrading its quality or increasing its consumption of water and energy • Protect existing and restore native habitats • Protect and maintain healthy forests • Manage aquatic and riparian invasive species	•Preserve or restore 3,500 acres of terrestrial aquatic habitat •Construct 39.5 miles of additional Santa Ana River Trail and Parkway

		• Protect estuarine and marine near-shore habitats • Reduce ornamental irrigated landscapes • Improve management support for landscaping that utilizes native and drought tolerant vegetation • Protect and Restore wildlife corridors • Protect endangered and threatened species and species of special concern through improved habitat	

Exhibit 1
CDFW Comment Letter (May 2020) for the OBMPU SEIR

State of California – Natural Resources Agency
CDFW OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

Comment Letter #2

May 8, 2020
Sent via email

Ms. Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue, Chino, CA 91708
Slee@ieua.org

Subject: Chino Basin Watermaster, Optimum Basin Management Program Update Draft Subsequent Environmental Impact Report - State Clearinghouse No. 2020020183

Dear Ms. Lee:

The California Department of Fish and Wildlife (CDFW) received the Subsequent Environmental Impact Report (SEIR) from the Inland Empire Utilities Agency (IEUA; the CEQA lead agency) for the Optimum Basin Management Program Update (OBMPU; Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

2-1 Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the OBMPU that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the OBMPU that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

2-2 CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. *(Id.,* § 1802.) Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

2-3 CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. For example, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

RESPONSE TO COMMENT
LETTER #2
CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
INLAND DESERTS REGION

2-1 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. IEUA acknowledges the role of the California Department of Fish and Wildlife's (CDFW) as a commenter on this Project.

2-2 IEUA acknowledges the CDFW's role as a Trustee Agency under CEQA for this Project, and understands that authorization as provided by the Fish and Game Code for several Project-related activities may be required.

2-3 IEUA acknowledges the CDFW's role as a Responsible Agency under CEQA for this Project, and understands that authorization as provided by the Fish and Game Code for several Project-related activities may be required.

PROJECT DESCRIPTION

The OBMPU covers the Chino Basin which includes approximately 235 square miles in the Upper Santa Ana River Watershed and lies within portions of San Bernardino, Riverside, and Los Angeles counties. The Chino Basin is mapped within the USGS – Corona North, Cucamonga Peak, Devore, Fontana, Guasti, Mount Baldy, Ontario, Prado Dam, Riverside West and San Dimas Quadrangles, 7.5 Minute Series topographic maps. The center of the Chino Basin is located near the intersection of Haven Avenue and Mission Boulevard at Longitude
2-4 34.038040N, and Latitude 117.575954W.

The Chino Basin Watermaster (Watermaster) developed a regional water resources and groundwater management program for the Chino Basin (Optimum Basin Management Program; OBMP). The update to the OBMP is intended to address possible program activities and projects at a programmatic level over the next 30 years. The current draft SEIR (herein referred to as 'OBMPU SEIR') addresses the current environmental setting, assesses the impacts related to the construction and operation of the regional program, and provides information to support required permitting process.

PROJECT BACKGROUND

The original OBMP and the accompanying Programmatic EIR (PEIR; July 2000) described the physical state of the groundwater basin and defined a set of management goals and actions. Agreements to implement the OBMP (termed 'Peace I Agreement' and 'Peace II Agreement'),
2-5 and their associated CEQA analysis (Peace II SEIR, 2010; SEIR amendment, 2017) were also approved. The OBMP identified and described several management activities that, if implemented, could achieve the OBMP goals. These activities, and associated objectives and tasks defined in the 2000 OBMP, have been retained for the OBMPU. The OBMPU Implementation Plan Update is a revision of the implementation plans included in the Peace I and Peace II Agreements and incorporates the proposed activities and facilities identified in the 2020 OBMPU and ongoing activities from the 2000 OBMP.

COMMENTS AND RECOMMENDATIONS

2-6 CDFW is concerned about the adequacy of the OBMPU SEIR in identifying potentially significant impacts and establishing adequate and enforceable mitigation measures. CDFW's comments and recommendations are presented below.

<u>Impact Analysis</u>

The SEIR describes the intent of the document as follows: "*This document assesses the impacts, including unavoidable adverse impacts and cumulative impacts, related to the construction and operation of the proposed Project. This Program (*Draft*) SEIR is also intended*
2-7 *to support the permitting process of all agencies from which discretionary approvals must be obtained for particular elements of this Project*." (SEIR, p. 1-2). Such analysis would allow CDFW to provide specific input on the adequacy of the analysis, and whether that analysis was sufficient for use in future discretionary actions, such as Fish and Game Code section 1602 Lake and Streambed Alteration Agreements or Fish and Game Code section 2081 Incidental Take Permits. However, the SEIR does not identify or assess any impacts to biological resources, and in most cases, defers this analysis to some future action. In the case of direct

2-4 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.

2-5 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.

2-6 As demonstrated below, the IEUA believes that the potentially significant impacts and extensive mitigation measures, specifically those meant to minimize biological resource impacts, are adequate; thus, IEUA disagrees with CDFW's assertion made in this comment.

2-7 The IEUA does not agree with the commenter's statement that the DSEIR does not identify or assess impacts to biological resources. The OBMPU proposes projects that fit into four Project Categories outlined under Section 3.5 of Chapter 3, Project Description, of the DSEIR (pages 3-42 and 3-43). The specific locations for the majority of the facilities outlined in the OBMPU are unknown, and furthermore, where a specific location is proposed (CIM, Jurupa Basin, Chino Desalters, etc.), specific proposals containing design or proposed improvements thereof have not yet been defined. Therefore, analysis of site specific biological resource impacts can only occur once a site is identified and a project has been defined. IEUA prepared the OBMPU as a Subsequent EIR, and CEQA states the following for a subsequent tier of a CEQA document: *Where a lead agency is using the tiering process in connection with an EIR for a large scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepare a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.* IEUA would like to point out that the original OBMP was implemented under similar circumstances for projects such as Chino Desalters, recycled water programs, hydraulic control, and other facilities/programs. Regardless, the Chino Basin stakeholders have worked closely with CDFW over the past 20 years to minimize impacts to important biological resources from direct ground disturbance and the Watermaster's Prado Basin Habitat Sustainability Program (PBHSP) was developed to provide sufficient information to manage Prado Basin's important resources from indirect impacts to from groundwater production. Please refer to the response to comment 2-8, below for a continued discussion of the concerns raised in this comment.

impacts to biological resources, the OBMPU SEIR defers this analysis to future CEQA analysis, stating, "*Because it is difficult to determine the number or extent of these kinds of impacts, direct impacts on special-status wildlife species will be addressed in subsequent, project specific environmental reviews once a specific component of the OBMPU has been defined for design and implementation*." (SEIR, p. 4-62). In the case of indirect impacts to biological resources, the OBMPU SEIR conceded that "*potential indirect impacts associated with future OBMP facilities include alteration of jurisdictional water hydrology, host plant stress, destruction of native vegetation, habitat fragmentation, and noise and light pollution*", but concluded that it would be "*difficult to quantify and measure these kinds of impacts, indirect impacts on special-status wildlife species are described qualitatively and will be quantitatively addressed in project specific second tier environmental evaluations*". (SEIR, p. 4-62). Similarly, for ongoing operations or maintenance activities requiring ground disturbance, clearing, and grubbing, the OBMPU SEIR concluded that these actions "*could cause erosion and sedimentation or could indirectly affect the hydrology of nearby jurisdictional waters and the species that depend on these resources*." However, the OBMPU SEIR determined that "*maintenance activities that would have potential impacts on special-status wildlife species are limited to the program right-of-way areas that are currently in service or that will be added to normal program operations and maintenance through separate design, environmental review and construction of such facilities at a later date*" (SEIR, p. 4-62).

2-7 cont'd

While CDFW recognizes the programmatic nature of the SEIR, some level of analysis could be completed at this time based on the data and information collected within the previous 20 years of OBMP implementation, information gathered in biological surveys for proposed Project areas, and the foreseeable impacts associated with future, contemplated projects. If the SEIR will defer biological analysis to future, second tier environmental analysis, the SEIR should specify the threshold that will be relied on for requiring additional environmental review, and which of the projects contemplated will be required to complete additional environmental review. If the threshold for triggering additional environmental review is low, or if additional environmental reviewed is not anticipated, CDFW requests that the lead agency recirculate this SEIR and include the results of an appropriate level of analysis for which CDFW may rely on for future discretionary actions. Regardless of the lead agency's approach for analyzing specific biological impacts, the SEIR must address the 'whole of the action', as it is inappropriate under CEQA review to divide a project into smaller, separate projects. The SEIR must address the cumulative effects of the Project as a whole.

2-8

The SEIR claims that, "*To the extent feasible, this document utilizes conservative (worst case) assumptions in making impact forecasts based on the assumption that, if impacts cannot be absolutely quantified, the impact forecasts should over-predict consequences rather than under-predict them*." CDFW disagrees that the SEIR provides conservative assumptions in forecasting impacts and argues that potential impacts may have been understimated. According to the OBMPU SEIR (Section 4.3 Biological), direct impacts from construction of any facility should "*only result in mostly minimal impacts on special-status wildlife species, because only a limited amount of marginal habitat for special-status wildlife species would be impacted by construction activities. All facilities would impact barren, urban, or agricultural areas, and thus construction would potentially impact only the special-status wildlife species that use mostly urban areas (e.g., special-status bird species, special-status mammal species, special-status bat species or species present in wetland or streambed habitats)*. Adjacency to urban areas does not necessarily determine habitat value or the use of these areas by special-status species. CDFW is concerned that the SEIR has trivialized the significance of the Project's potential impacts on

2-9

2-8 Please refer to responses to comments 1-35 and 1-40. The scope of the OBMPU is such that many projects could be developed within a diverse range of areas within the Chino Basin, which is a vast area within which to identify specific biological resources impacts that would result from the proposed Program. As required in Section 15152 of the State CEQA Guidelines, specific findings were made for each biology issue based on sensitivity of known resources in the Chino Basin, and specific mitigation measures were identified to address specific types of impacts. The suggested approach in this comment was actually used in evaluating the potential for direct impacts from construction of storage basins in the Mill Creek area (found to be a potentially significant impact to biological resources) and initially the same conclusion was envisioned for the indirect effects of future water diversion projects. Refer to response to comment 5-7 which addresses the direct and indirect effects of diverting surface water (stormwater flows, recycled water flows, and urban dry-weather flows). Due to the lack of data on how such a diversion program could be implemented in the future, however, this topic was deferred to second-tier CEQA evaluations.

The DSEIR identified the specific steps that would determine the level of significance for a given OBMPU facility on page 4-64, and acknowledges that there are many areas within the Chino Basin that may support candidate, sensitive, or special status species. As such, it is not possible, as the commenter suggests, to provide site-specific impacts related to future OBMPU Projects, as the level of specificity for OBMPU Projects required to make such findings has yet to be determined. Further, where facilities have some locational flexibility the primary mitigation is to avoid by relocating to a site without significant biological resources.

The commenter suggests that the DSEIR should "specify the threshold that will be relied on for requiring additional environmental review, and which of the projects contemplated will be required to complete additional environmental review." CEQA Guidelines sections 15162, 15163, and 15164 provide standards for when subsequent environmental analysis is required, and if required, what type of CEQA document should be prepared. Further, the bullet points outlined on page 4-64 of the DSEIR clearly outline the manner in which thresholds for future Projects would be used to determine the level of significance for a given OBMPU facility.

1. For each new project, biological resources and supporting habitat will be reviewed for presence or absence.
2. Impacts will be determined using a habitat-based approach utilizing a combination of background review, habitat mapping during field surveys, and aerial photograph interpretation.
3. Impacts to critical habitat will be determined based on the location of such habitat to a given project footprint and the presence of primary constituent elements.
4. Construction and operational impacts will be considered temporary if they can be fully restored to pre-disturbance conditions following construction.
5. Impacts will be considered permanent when they have lasting effects beyond the project construction period, or cannot be fully restored following construction.
6. Impacts on wetlands/jurisdictional waters will be considered permanent where these features cannot be restored to their pre-project condition due to the permanent loss of jurisdictional features caused by new infrastructure.

For a detailed discussion of the biological resource mitigation measures and performance standards thereof, please refer to response to comment 1-37, which

demonstrates the that the OBMPU DSEIR does not defer mitigation, and is committed to adhere to stringent performance standards.

IEAU disagrees that the DSEIR fails to analyze the "whole of the action." The DSEIR analyzes direct, indirect, and cumulative impacts associated with the OBMPU, as required by CEQA. For example, cumulative impacts related to biological resources are discussed on page 4-74 of the DSEIR. The DSEIR determined that, there are certain areas, such as the Mills Wetlands and Prado Basin within the overall project area of potential impact where the resource impacts from constructing new infrastructure may cause unavoidable significant adverse impacts on biological resources. Because a specific proposal to develop a project within these and other areas of the Basin known to contain sensitive resources has not been submitted to the Watermaster, there is a potential that an individual OBMPU facility may be developed and have operations within an area containing biological resources that cannot be avoided, even at the design level. Consequently, a finding that the OBMPU could cause an unavoidable significant adverse or cumulatively considerable impact on biological resources was reached in the DSEIR. However, this is a prospective impact forecast because the specific location of facilities is at present unknown and analysis of site specific biological resource impacts can only occur once a site is identified. As such, the IEUA believes that the DSEIR has fully addressed the cumulative effects of the project as a whole.

2-9 CDFW appears to assume that, based on this quote, the OBMPU assumes that special status species do not utilize urban areas. However, within the quote abstracted from the DSEIR, the DSEIR states that "construction would potentially impact only the special-status wildlife species that use mostly urban areas," which acknowledges that future OBMPU Projects may impact special status species and habitat. IEUA would like to amend that, the suggestion that construction of OBMPU facilities would occur within barren, urban, or agricultural areas, does not negate the fact that special status species, critical habitat, and habitat supporting special status species exists within the Chino Basin. Furthermore, IEUA has amended MM **BIO-1** in the FSEIR to expand the requirement for site surveys to encompass various types of OBMPU project sites, not just undeveloped land to ensure that impacts that may occur within all valuable habitat— in urban areas, or otherwise— are mitigated completely as part of the FSEIR (see underline, strikeout changes, below):

BIO-1 ***All future OBMPU Projects shall be required to consult with a qualified professional to determine the need for site-specific biological surveys. Where a site has been determined to require a site-specific survey by a qualified professional, in any case in which a future OBMPU project ~~Where future project-related impacts~~ will affect undeveloped land, or in which the Implementing Agency seeks State Funding, site surveys shall be conducted by a qualified biologist/ecologist. If sensitive species are identified as a result of the survey for which mitigation/compensation must be provided in accordance with regulatory requirements, the following subsequent mitigation actions will be taken:***

- ***a. The project proponent shall provide compensation for sensitive habitat acreage lost by acquiring and protecting in perpetuity (through property or mitigation bank credit acquisition) habitat for the sensitive species at a ratio of not less than 1:1 for habitat lost. The property acquisition shall include the presence of at least one animal or plant per animal or plant lost at the development site to compensate for the loss of individual sensitive species.***
- ***b. The final mitigation may differ from the above values based on negotiations between the project proponent and USFWS and CDFW for any incidental take permits for listed species. The project proponent shall retain a copy of the incidental take permit as verification that the mitigation of significant biological***

resource impacts at a project site with sensitive biological resources has been accomplished.

c. Preconstruction botanical surveys for special-status plant communities and special-status plant species will be conducted. in areas that were not previously surveyed because of access or timing issues or project design changes, pre-construction surveys for special-status plant communities and special-status plant species will be conducted before the start of ground-disturbing activities during the appropriate blooming period(s) for the species.

Additionally, IEUA has amended MM **BIO-6** in the FSEIR to expand the requirement for burrowing owl surveys to various types of OBMPU project sites, not just undeveloped land to ensure that potential impacts to burrowing owl at all potential areas containing burrowing owl habitat—within urban areas, or otherwise—are addressed and mitigated completely as part of the FSEIR (see underline, strikeout changes, below):

BIO-6 ***All future OBMPU Projects shall be required to consult with a qualified professional to determine the need for site-specific protocol burrowing owl surveys. Prior to commencement of construction activity where a site has been determined to require a protocol burrowing owl surveys survey by a qualified professional, or in locations that are not fully developed, protocol burrowing owl survey will be conducted using the 2012 survey protocol methodology identified in the "Staff Report on Burrowing Owl Mitigation, State of California, Natural Resources Agency, Department of Fish and Game, March 7, 2012", or the most recent CDFW survey protocol available. Protocol surveys shall be conducted by a qualified biologist to determine if any burrowing owl burrows are located within the potential area of impact. If occupied burrows may be impacted, an impact minimization plan shall be developed and approved by CDFW that will protect the burrow in place or provide for passive relocation to an alternate burrow within the vicinity but outside of the project footprint in accordance with current CDFW guidelines. Active nests must be avoided with a 250-foot buffer until all nestlings have fledged.***

The intent of these modifications is to broaden the scope of analysis for site specific impacts to include all potential OBMPU project sites. IEUA believes that, with the above changes to MMs **BIO-1** and **BIO-6**, potential impacts to any special status species within a future OBMPU project sites will be mitigated to the greatest extent feasible. These responses to comments demonstrate that the DSEIR has not underestimated potential biological resource impacts.

2-9 cont'd

special-status species that could use such aeras. Many special-status species, including burrowing owl (*Athene cunicularia*) and tricolored blackbirds (*Agelaius tricolor*) use disturbed areas, such as agricultural fields and manmade structures (burrowing owls) that could be indirectly and/or directly impacted by the Project. Impacts to special-status species, regardless of habitat quality or location, must be identified, evaluated and mitigated to a level below significance.

Analysis of Cumulative Effects to Biological Resources

2-10

The Watermaster prepared and circulated a Notice of Preparation (NOP) for the OBMPU. As part of the review process, Orange County Water District (OCWD) requested that the OBMPU SEIR evaluate within Prado Basin the following:

1) The groundwater levels (e.g., groundwater pumping, groundwater storage, or groundwater overdraft) and the distribution of groundwater dependent ecosystem, such as riparian vegetation and wetlands;
2) Any changes or effects to surface flow rates in Chino Creek, Mill Creek, and the Santa Ana River;
3) The potential impacts of increased fire risk, riparian habitat loss, and riparian habitat conversion to non-native plant species; and
4) A quantitative analysis of impacts on Santa Ana River flows.

According to the OBMPU SEIR, impacts to biological resources have been assessed in the Biological Resources Subchapter 4.3 and in the Biological Resources Assessment (Volume 2 of the SEIR), with mitigation being identified "*where applicable to address impacts of OBMPU Projects on groundwater levels and potential related habitat impacts*".

2-11

The comments below are separated to reflect the distinction between the entire watershed within the Chino Basin and the 'Prado Basin'.

Prado Basin

Under Section 4.3.6(a).1 Prado Basin Habitat, it was concluded that: "***a reasonable assumption of the volume of water consumed by Prado Basin wetland/riparian habitat is about 18,000 AFY (****emphasis added). The IEUA and Western Municipal Water District (WMWD) are responsible for an average annual flow of 42,000 afy at Prado. However, when their cumulative credits exceed 30,000 afy (which they currently do and will continue to do so for the foreseeable future), they are responsible for a minimum annual flow of 34,000 afy. IEUA and WMWD split this responsibility 50/50, thus each agency is responsible for 17,000 afy of flow at Prado. The OBMPU is not anticipated to result in the inability of either IEUA or WMWD to meet this obligation, **and is therefore not anticipated to result in a significant impact to the health of the habitat supported at Prado Basin*** (emphasis added)".

CDFW is concerned that "reasonable assumptions", rather than data and detailed analyses, were used to determine whether significant impacts to habitat are anticipated to occur. The Watermaster, on behalf of the Chino Basin stakeholders and parties, is to maintain habitat in the Prado Basin as defined in the Peace II SEIR. Specifically, within the Peace II SEIR (Section 4.3.8 Cumulative Impacts), it states that "*the proposed OBMPU may result in a reduction in surface flows into Prado Basin. In addition, Low Impact Development ordinances, local policies,*

2-10 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project.

2-11 IEUA and Watermaster are unaware of any higher "assumptions" for the volume of water required to meet the evapotranspiration demands of the Prado Basin habitat. Since water diversion evaluations are deferred to a second-tier CEQA evaluation, detailed analyses will be able to incorporate the data from the Upper Santa Ana Watershed Habitat Conservation Plan (HCP) and other studies conducted specifically for proposed diversions. IEUA and Watermaster have partnered with CDFW in the development of the HCP, and are working towards the same goal, which is to protect sufficient habitat to support species of concern in the HCP. As noted in the DSEIR, the potential impact of any diversion will depend on specific content of the diversion proposal. As indicated in the DSEIR a proposal to install diversion facilities to capture periodic excess stormwater runoff flows may have minimal impact, while continuous diversions during drought years may have greater impact. The commenter is correct that a monitoring process is in place to evaluate the effects of diversions by all water agencies in the Upper Santa Ana River Watershed. Further, based on communications with Valley District, the HCP EIR should be available in the near future, and the published data can then be used in conjunction with any future proposal in the Chino Basin to divert surface water, unless they are already included in the Santa Ana River HCP EIR.

2-11 cont'd

and municipal storm water detention regulations will encourage water conservation and flow detention, resulting in a cumulative reduction in surface flows reaching Prado Basin. ***These cumulative flow reductions may result in reduced acreage of healthy riparian forest that supports special-status species such as least Bell's vireo as well as aquatic species such as Santa Ana sucker and Southern California arroyo chub*** (emphasis added)*. To mitigate the effects of the cumulative diversions on habitat values and conservation objectives, regional organizations such as the Santa Ana Watershed Project Authority (SAWPA) and San Bernardino Valley Water District have developed local programs and partnerships to address cumulative impacts to habitat within Prado Basin.*" Pursuant to the OBMP Implementation Plan, long-term plans for monitoring groundwater production, groundwater level, groundwater quality, ground level (including remote sensing), surface water, and well construction/destruction have been developed and implemented to not only meet the OBMP requirements, but to also meet other regulatory requirements and Watermaster obligations under agreements, Court orders, and CEQA.

2-12

For example, the Prado Basin Habitat Sustainability Program (PBHS) has produced a time series of data and information on the extent and quality of the riparian habitat in the Prado Basin over a historical period that includes both regional mapping using multi-spectral remote-sensing data and air photos. In particular, the 2017 Annual Report determined that: 1) discharge in the Santa Ana River and its tributaries has declined since 2005; 2) decreases in the normalized difference vegetation index (NDVI) observed from 2015-2017 at several areas occurred during the growing-season for both Chino Creek and Mill Creek; and 3) northern reaches above the Mill Creek and the Santa Ana River confluence are "losing reaches" characterized by streambed recharge, while most other areas along Chino Creek and Mill Creek are "gaining reaches" characterized by groundwater discharge. This and other available data should be used in analyzing the potential cumulative impacts of the Project. CDFW realizes that the full extent of OBMPU may not be known at this time, but maintains that in order to determine significant environmental impacts and feasible mitigation measures, meaningful analyses need to be conducted and disclosed prior to Project approval.

2-13

While the results of the PBHS were not included in the OMBPU SEIR, it did clarify that "*the monitoring within the PBHS itself is not considered mitigation, but the commitment of Watermaster to initiate adaptive management programs to prevent significant loss of habitat (due to hydraulic control) serves as the mitigation to offset such damage or loss of Prado Basin Habitat*". As this monitoring program is intended to prevent impacts to habitat, it would be beneficial to discuss the monitoring results, adaptive management actions taken as a result of adverse effects identified, and strategies to mitigate potential future impacts that may occur from this proposed Project. To be effective, CDFW recommends that adaptive management should include: (1) objectives describing the desired condition; (2) management that is designed to meet the objectives; (3) monitoring to determine if the objectives are, or have been, met; and (4) management that is adapted if the objectives are not reached. To avoid irreversible change, detection of smaller changes may be important while they are still relatively minor. CDFW is available to assist the IEUA to identify 'adverse impacts to the riparian habitat or special-status species' and coordinate with all parties on future adaptive management action(s) that may need to be implemented.

2-14

Burrowing owl
The OBMPU SEIR discusses the need and availability of water to sustain certain vegetation communities and the species that depend on these habitats. The SEIR should also address

2-12 Please refer to response to comment 2-11. In addition, MM **BIO-25** commits Watermaster to continuing the Prado Basin Habitat Sustainability Program (PBHSP), and requires use of that dataset to evaluate potential impacts to Prado Basin habitat that may be caused by proposed diversion projects. At this time, no specific diversions in the Chino Basin have been proposed, and proposals being considered in other portions of the Upper Santa Ana River Watershed have not yet been collectively identified. Based on communications with Valley District, the HCP EIR should be available in the near future, and the published data can then be used in conjunction with any future proposal in the Chino Basin to divert surface water, unless they are already included in the Santa Ana River HCP EIR.

2-13 Please refer to response to comment 2-12, referencing MM **BIO-25**, and a similar comment and response, 5-4, from OCWD. As indicated in response to comment 2-12, Mitigation BIO-25 incorporates the PBHSP and requires use of that dataset to evaluate potential impacts caused by proposed diversion projects.

The commenter notes that it would be beneficial to discuss the results of monitoring within the PBHS, adaptive management actions taken as a result of adverse effects identified, and strategies to mitigate potential future impacts. IEUA and Watermaster previously agreed to implement MM 4.4-3 as part of the 2010 Peace II EIR, which stated *"IEUA, Watermaster, OCWD and individual stakeholders, that choose to participate, will jointly fund and develop an adaptive management program that will include, but not be limited to: monitoring riparian habitat quality and extent; investigating and identifying essential factors to long-term sustainability of Prado Basin riparian habitat; identification of specific parameters that can be monitored to measure potential effects of Peace II Agreement implementation effects on Prado Basin; and identification of water management options to minimize the Peace II Agreement effects on Prado Basin. This adaptive management program will be prepared as a contingency to define available management actions by Prado Basin stakeholders to address unforeseeable significant adverse impacts, as well as to contribute to the long-term sustainability of the Prado Basin riparian habitat."* MM 4.4-3 is being implemented under the supervision of the Prado Basin Habitat Sustainability Committee. As of this time, no adverse effects have been identified through monitoring within the PBHS, and as such, no adaptive management actions have been taken as a result. IEUA and Watermaster are open to discuss "adaptive management" options on a watershed-wide basis with the commenter and any other interested parties under the supervision of the Prado Basin Habitat Sustainability Committee in a collaborative manner. The framework is in place to do so through MM 4.4-3 of the 2010 Peace II EIR. Furthermore, as stated throughout these responses to comments, water diversion evaluations are deferred to a second-tier CEQA evaluation, which will enable further collaboration with CDFW and other agencies where a specific project is being proposed, such that tangible mitigation and adaptive management can be developed. As such proposals are developed, more detailed analyses will be able to incorporate the data from the Upper Santa Ana Watershed HCP and other studies conducted specifically for proposed diversions, enabling a greater range of data from which to develop adaptive management strategies.

2-14 This and the following comment summarize activities related to the operations of the Prado Dam that may adversely impact burrowing owl (BUOW) habitat in the Chino Basin. While the OBMPU may affect the amount of water that flows into Prado Dam, the OBMPU as defined does not anticipate capturing additional water behind Prado Dam and raising the reservoir's water level. Accordingly, the DSEIR does not analyze the

impacts of potential inundation behind Prado Dam on BUOW habitat because that is not part of the OBMPU project. With the exception of the proposed storage basins in the OBMPU, the majority of projects will cause minimal disturbance within undeveloped land in the southern portion of the Chino Basin. This does not mean the proposed OBMPU projects will not encounter BUOW, but with implementation of MM **BIO-6** direct adverse impacts to BUOW can be fully mitigated. In order to address cumulative or indirect impacts to BUOW, CDFW may need to assess distribution and constituent elements so that habitat loss affecting this species may also be offset.

areas where flooding and water inundation is not preferred. The primary purpose of Prado Reservoir is flood control for the Santa Ana River Watershed, with water conservation being secondary. CDFW is aware that an agreement between OCWD, the United States Army Corps of Engineers (USACE) and the United States Fish and Wildlife Service was reached in 1993 that allowed for increased water conservation from March through September each year to store up to 26,000 acre-feet of water at elevation 505 feet. In 2006, a subsequent agreement was made to capture additional water behind Prado Dam to store more water from October through February each year by increasing the conservation pool for recharge of groundwater from elevation 494 feet to 498 feet. It is CDFW's understanding that a deviation to the Prado Dam Water Control Plan to increase the flood season water surface elevation of the pool behind Prado Dam from an elevation 498 feet to 505 feet for a period of five years has occurred. More water storage, particularly during winter, may increase the extent of areas subject to inundation, including burrowing owl occupied and/or suitable breeding and wintering habitat.

2-14 cont'd

Much of the land contained below the 566-foot inundation line behind Prado Dam is intended to accommodate natural open space, wildlife preserves, and crop farming. Within the area previously known as the 'Dairy Preserve', large housing and industrial developments, including the Preserve (City of Chino), as well as, the Ontario Ranch (City of Ontario) have collected development fees over the last two decades to offset impacts to burrowing owls. The CEQA documents for these large planning developments proposed the creation, enhancement, and/or expansion of 300 acres (600 acres total) of high-quality wildlife habitat located generally below the Prado Dam 566-foot inundation line. While CDFW is unclear whether the proposed increase of water storage will affect habitat suitable for burrowing owl, given the past increases of storage to meet stakeholders demands, CDFW would like to have a better understanding of how burrowing owls and their habitat will be monitored and mitigated for over the next 30 years.

2-15

Watershed

Within the OBMPU SEIR Section 4.3 Biological Resources, the "*potential impacts on jurisdictional waters, special-status plant communities, protected trees, special-status plant, and wildlife species (including critical habitat) will be analyzed for each facility as site-specific design has been established. Once a particular facility area of potential effect (APE) is established,* ***a detailed second-tier evaluation to assure resource impacts are quantified, and site-specific measures are identified. Where none of the biological resource impacts occur in Prado Basin will occur, no further biological resource impact analysis may be necessary*** *(emphasis added).*" Furthermore, Section 4.3.6(a).1 Prado Basin Habitat concluded that for any future surface water diversions, "*mitigation is required to continue the monitoring program and to conduct detailed environmental reviews of future diversion impacts on* ***Prado Basin habitat prior to approval of such projects*** *(emphasis added). Thus, no specific diversion project can be implemented until an appropriate second-tier, public CEQA review is completed*".

2-16

CDFW is concerned that potential impacts will only be addressed if those impacts will occur within the Prado Basin, even though the project covers the entirety of the Chino Basin. Under Section 15355 of the CEQA Guidelines, cumulative effects refers to "*two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts*". Physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The Lead Agency must determine whether the cumulative impact is significant, as well as whether an individual effect is 'cumulatively considerable'. This means "*the incremental*

2-15 Please refer to response to comment 2-14.

2-16 The commenter misquotes language found on page 4-62 of the DSEIR. The omitted portions of the segment quoted in comment 2-16 are indicated in underline: "Once a particular facility area of potential effect (APE) is established, the following steps will be taken during a detailed second-tier evaluation to assure resource impacts are quantified, and site specific measures are identified: Where none of the biological resource impacts discussed under the 4.3.6(a).1 Conclusion below, will occur, no further biological resource impact analysis may be necessary; Where potentially significant impacts may occur, but specific mitigation outlined under 4.3.7 Avoidance, Minimization, and Mitigation Measures, below, can reduce such impacts to a less than significant level." This discussion is not intended to indicate that only biological resource impacts in the Prado Basin are analyzed and mitigated by the DSEIR. In fact, the impact conclusion at the end of the section states, "Ultimately, because the Chino Basin contains many areas that may support candidate, sensitive, or special status species, and the specific sites in which future OBMPU facilities will be developed is presently unknown, a significant impact may occur."

Nevertheless, MM **BIO-25** in the FSEIR has been revised, as follows, to remove any doubt that it should apply to affected sensitive habitat:

BIO-25 Permanent Water Diversion Projects: The Watermaster shall continue to prepare the annual Prado Basin Habitat Sustainability Monitoring Program. A second-tier CEQA evaluation shall be conducted for proposed water diversion projects associated with the OBMPU. The potential impacts to Prado Basin and sensitive habitat (for example riparian, wetland, or critical habitat) from implementation of such diversion projects shall receive public review, including pertinent wildlife management agencies and interested parties.

effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (Guidelines Section 15064(h)(1)).

2-16 cont'd

The OBMPU SEIR includes storage basin projects that would divert flows that ultimately reach Prado Basin (Project Category 3). Also, groundwater pumping can alter how water moves between an aquifer and a stream, lake, or pond by either intercepting groundwater flow that discharges into the surface-water body under natural conditions, or by increasing the rate of water movement from the surface-water body into an aquifer (e.g., draw down, cone of depression, etc.). Finally, diversion of surface water, recycling of water, and other water manipulation can alter and affect biological resources throughout the watershed. Thus, CDFW strongly encourages IEUA to consider the entire watershed and how the OBMPU will affect vegetation communities and the species that depend on those habitats.

Mitigation

2-17

The SEIR states, "*if the regulatory agencies determine an alternative, equivalent mitigation program during acquisition of regulatory permits, such measure shall be deemed equivalent to the avoidance and minimization measures listed in SEIR Section 4.3.7… no additional environmental documentation shall be required to implement a measure different than the listed avoidance measures*". CEQA requires environmental review of discretionary projects at the earliest *meaningful* stage to analyze and plan for the reduction and/or avoidance of environmental impacts *before* deciding to approve the project(s). While there are often discrepancies between CEQA's mandate for *early* review and its requirement of *detailed* discussions of impacts and mitigation measures, postponing the analysis of impacts to a future date is not appropriate. CEQA Guidelines §15126.4, subdivision (a)(1)(8) states formulation of feasible mitigation measures should not be deferred until some future date. The Court of Appeal in *San Joaquin Raptor Rescue Center* v. *County* of *Merced* (2007) 149 Cal.App.4th 645 struck down mitigation measures which required formulating management plans developed in consultation with State and Federal wildlife agencies after project approval. Courts have also repeatedly not supported conclusions that impacts are mitigatable when essential studies, and therefore impact assessments, are incomplete *(Sundstrom* v. *County* of *Mendocino* (1988) 202 Cal. App. 3d. 296; *Gentry* v. *City* of *Murrietta (1995)* 36 Cal. App. 4th 1359; *Endangered Habitat League, Inc.* v. *County* of *Orange* (2005) 131 Cal. App. 4th 777). Therefore, CDFW strongly suggests the SEIR incorporate sufficient, specific, and current biological information on the existing habitat and species at the Project site; measures to minimize and avoid sensitive biological resources; and mitigation measures to offset the loss of native flora and fauna and State waters. The CEQA document should not defer impact analysis and mitigation measures to future regulatory discretionary actions, such as a Lake or Streambed Alteration Agreement.

FURTHER COORDINATION

2-18

The CDFW appreciates the opportunity to comment on the SEIR for the OBMPU (State Clearinghouse No. 2020020183) and recommends that the IEUA address the CDFW's comments and concerns.

If you should have any questions pertaining to the comments provided in this letter, or wish to schedule a meeting and/or site visit, please contact Kim Romich at (909) 980-3818 or at kimberly.romich@wildlife.ca.gov.

2-17 Please refer to response to comment 2-8 above. Additionally, this comment appears to suggest that the DSEIR defers mitigation and does not commit to enforceable performance standards. The following responses are provided to demonstrate lack of deferral and commitment to performance standards. Response to comment 1-37 demonstrates that the OBMPU DSEIR does not defer mitigation, and is committed to adhere to stringent performance standards. Furthermore, the specific location of OBMPU facilities is presently unknown and analysis of site specific biological resource impacts can only occur once a site is identified. As such, no one given project has been defined that would require a Lake or Streambed Alteration Agreement (LSAA) at this time; once a proposal for a given project is defined, an analysis as to whether a second-tier environmental document would be required. If a LSAA is required, that second-tier environmental document would be used to satisfy the environmental review necessary for the LSAA.

2-18 The comment is noted and will be made available to the IEUA decision-makers as part of the Final EIR package prior to a decision on the proposed project. The contact information provided in this comment will be retained in the project file.

SINCE 1933

ORANGE COUNTY WATER DISTRICT

ORANGE COUNTY'S GROUNDWATER AUTHORITY

October 14, 2021

Sylvie Lee, P.E.
Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Subject: OCWD Comments on NOP for the Inland Empire Utilities Agency Chino Basin Program (SCH 202109310)

Dear Ms. Lee,

The Orange County Water District (OCWD or District) appreciates the opportunity to comment on the Notice of Preparation (NOP) for the Inland Empire Utilities Agency Chino Basin Program (CBP) (SCH 202109310)

OCWD is a special district formed in 1933 by an act of the California Legislature. The District manages the groundwater basin that underlies north and central Orange County. Water produced from the basin is the primary water supply for approximately 2.5 million residents living within the District's boundaries.

It is OCWD's understanding of the project description provided in the NOP that the CBP will produce 15,000 acre-feet per year (afy) of recycled water to recharge the Chino Basin. To create 15,000 afy of recycled water the Inland Empire Utility Agency (IEUA) must divert 17,000 afy of tertiary treated wastewater that is currently discharged into the Santa Ana River (SAR) or its tributaries above Prado Dam.

Furthermore, OCWD's understanding of the proposed project is that in exchange for producing 15,000 afy of recycled water, IEUA will not import the equivalent volume from the State Water Project (SWP), leaving the water in storage (essentially leaving the water in Oroville Dam). During periods when supplemental flows are needed downstream of Oroville Dam for environmental enhancement purposes, such as a drought, the volume of water not imported by IEUA (up to 50,000 acre-feet per event) could be released from Oroville Dam to support Salmonids up to a maximum of 375,000 acre-feet (af) over 25 years.

As an industry leader in wastewater recycling, OCWD supports IEUA's efforts to recycle wastewater to meet growing demands, reduce their dependence on imported water, while simultaneously complying with their basin objective for total dissolved solids (TDS) and satisfying minimum flow requirements of the 1969 Santa Ana River Judgment.

OCWD currently recharges essentially all the non-stormflow (baseflow) of the Santa Ana River water discharged from Prado Dam. Baseflows consists primarily of wastewater discharges above Prado Dam. The NOP states:

> "The CBP would produce 15,000 AFY of new water supply for a period of 25-years to provide for the State exchange, to be used in blocks of up to 50,000 AFY in hydrologically drier years when pulse flows in the Feather River would provide the most ecosystem benefit and other SWP operations would not be affected."

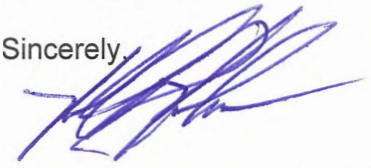
Given that OCWD recharges essentially all the baseflow of the SAR discharged from Prado Dam, it is not clear how the project will provide a new water supply to Southern California or to the State of California. If the CBP is constructed, Orange County will need to increase the volume of imported water purchased in order to replace any reductions in SAR baseflows that result from the project to meet existing water demands. The EIR should discuss and quantify the change in the amount of imported water to Southern California during an average year and over the 25-year lifespan of the CBP that would result from implementation of the CBP. The EIR should analyze and quantify the biological benefit (or impact) to the Salmonoid species by accounting for the change in imported water needs of Southern California as a result of the CBP. Similarly, the EIR should also analyze and quantify greenhouse gas emissions by accounting for the CBP's impact on Southern California's total imported water needs.

The Prado Basin contains the single largest stand of forested riparian habitat remaining in coastal southern California. A total of 4,400 acres of the Prado Basin consists of wetland and riparian plant communities. The riparian woodland provides habitat for a wide variety of wildlife species, particularly birds. The avifauna is a diverse assemblage of resident and migratory species. The raptor concentration in the Prado Basin is among the largest remaining in southern California today. In 2021, for the first time in recent history, the Prado Basin was home to a nesting pair of bald eagles. OCWD manages a large portion of this property and has undertaken numerous habitat restoration and species recovery projects. Through its restoration and management activities, OCWD has fostered the recovery of the federally and state listed endangered least Bell's vireo (*Vireo pusillus bellii*).

The biological impacts to the Prado Basin resulting from CBP and its removal of 17,000 afy of surface water from the Santa Ana River Watershed must be thoroughly analyzed and quantified in the EIR. The EIR should include discussion of the monitoring that will occur to determine if the CBP is causing negative impacts to the Prado Basin riparian habitat. Further, mitigation measures should be included that describe what specific actions will be taken if negative impacts occur because of the CBP.

If you have any questions, please contact Kevin O'Toole at (714) 378-8248 or kotoole@ocwd.com.

Sincerely,



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