EHL Reservoir and Intake Channel Project
Draft Environmental Impact Report
SCH No. 2023100140

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ACRONYMS AND ABBREVIATIONS

Acronym/ Abbreviation	Definition
AAC	All-American Canal
AB	Assembly Bill
ADRP	Archeological Data Recovery Program
AF	acre-feet
amsl	above mean sea level
APCD	Air Pollution Control District
APE	area of potential effect
AQAP	Air Quality Attainment Plan
ARB	Air Resources Board
AVR	average vehicle ridership
BACT	Best Available Control Technology
Basin	Colorado River Basin
BAU	Business As Usual
BCC	U.S. Fish and Wildlife Service bird of conservation concern
BLM	Bureau of Land Management
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention Law
CalOSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDCA	California Desert Conservation Area
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH_4	methane
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	Imperial County

Acronym/ Abbreviation	Definition
CPRMTP	Cultural and Paleontological Resources Monitoring and Treatment Plan
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CVWD	Coachella Valley Water District
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DOT	Department of Transportation
DPM	diesel particulate matter
DRECP	Desert Renewable Energy Conservation Plan
DTSC	California Department of Toxic Substances Control
EA	Environmental Assessment
EHL	East Highline
EIR	Environmental Impact Report
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTHL	Flat-tailed Horned Lizard
GHG	greenhouse gas
GIS	geographic information system
GPS	Global Positioning System
HCP	Habitat Conservation Plan
HFC	hydrofluorocarbon
I-8	Interstate Highway 8
IA	Implementation Agreement
ICAPCD	Imperial County Air Pollution Control District
ICFD	Imperial County Fire Department
IID	Imperial Irrigation District
IRWMP	Integrated Regional Water Management Plan
ITP	Incidental Take Permit
LCR	Lower Colorado River
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
L_{eq}	equivalent sound level
MBTA	Migratory Bird Treaty Act

Acronym/ Abbreviation	Definition
MLD	most likely descendant
MM	Mitigation Measure
MT	metric tons
MMT	million metric tons
mph	miles per hour
MSCP	Multiple Species Conservation Program
MW	megawatts
MWD	Metropolitan Water District of Southern California
N_2O	nitrous oxide
N/A	not applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Protection Act
NF_3	nitrogen trifluoride
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NO_2	nitrogen dioxide
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
OES	Office of Emergency Services
PDF	project design feature
PEIR	Program Environmental Impact Report
PFC	perfluorocarbon
PFYC	Potential Fossil Yield Classification
PI	Principal Investigator
$PM_{2.5}$	fine particulate matter
PM_{10}	coarse particulate matter
PRC	Public Resources Code
PV	Photovoltaic

Acronym/ Abbreviation	Definition
QSA	Quantification Settlement Agreement
Reclamation	United States Bureau of Reclamation
RCRA	Resource Conservation and Recovery Act
ROW	right-of-way
RPS	Renewables Portfolio Standard
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SDCWA	San Diego County Water Authority
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SO_2	sulfur dioxide
SPCCC	spill prevention control and countermeasures
SR-98	State Route 98
SSAB	Salton Sea Air Basin
SSC	California species of special concern
SSU	shovel scrape unit
STP	shotel test pit
SWRCB	State Water Resources Control Board
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
TAC	toxic air contaminant
TCR	Tribal cultural resource
TMDLs	total maximum daily levels
UFC	Uniform Fire Code
U.S.	United States
USACE	United States Army Corps of Engineers
USCB	United States Bureau of Labor Statistics
USFWS	United States Fish and Wildlife Service
VOC	volatile organic compound
VRI	visual resource inventory
VRM	visual resource management
WDR	Waste Discharge Requirement
WEAP	Worker Environmental Awareness Program

EXECUTIVE SUMMARY

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EXECUTIVE SUMMARY

This chapter provides a summary of the draft environmental impact report (Draft EIR) for the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project). Included in this summary are areas of known controversy and issues to be resolved, a summary of Project alternatives, a summary of all project impacts and associated mitigation measures, and a statement of the ultimate level of significance after mitigation is applied.

ES.1 DOCUMENT PURPOSE

This Draft EIR was prepared by the Imperial Irrigation District (IID), as the lead agency for primarily carrying out the full Project. IID will inform decision makers and the public of the potential significant environmental effects associated with the Proposed Project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 (California Public Resources Code, Section 21000 et seq.) and CEQA's implementing guidelines (CEQA Guidelines; 14 CCR 15000 et seq.) published by the Resources Agency of the State of California. CEQA Guidelines Section 15123 requires that the summary identify each significant impact, recommended mitigation measures, and alternatives that would reduce or avoid the project's significant impacts on the environment. The summary also is required to identify areas of controversy, including issues raised by public agencies and the public, and the issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant impacts of the Proposed Project. This Executive Summary provides the brief summary required by CEQA Guidelines Section 15123.

ES.2 PROJECT LOCATION

The Proposed Project is located in the southern region of Imperial County, California, east of Calexico and southeast of Holtville. The Project is specifically located on four parcels (Assessor's Parcel Numbers 055-250-020, 059-310-005, 055-310-007 and 055-310-008 (covering an approximate footprint area of 591 acres including two northern staging areas within an IID owned parcel). The All-American Canal (AAC) is located approximately 1.5 miles south of the proposed reservoir basin and two miles south of Interstate 8. The Project site is accessible by State Route 98 (SR-98) to the south. To the east of the Proposed Project site, is open and vacant desert land with desert shrubbery and patches of ground cover owned by the United States Bureau of Land Management (BLM). Agricultural fields are to the northwest, west and south of the Project site, with the East Highline Canal (owned and operated by IID) directly adjacent to the west of the Project site.

Land Use and Zoning

The Proposed Project site is primarily flat land zoned as A-2 (General Agriculture) and A-3 (Heavy Agriculture), with a small portion that crosses a parcel of federal lands withdrawn to the United States Bureau of Reclamation (Reclamation). According to the Imperial County (County) General Plan Land Use Element, the Proposed Project site is designated as Agriculture.

ES.3 PROJECT DESCRIPTION

ES.3.1 Project Background

IID is a limited-purpose public agency, formed under the laws of the State of California. IID holds rights to take water from the Colorado River and deliver it to its water service area within the County of Imperial. IID's operational activities are associated with irrigation (i.e., the diversion, measurement, conveyance, and delivery of Colorado River water to customers within the IID water service area through its canal system), drainage (i.e., the collection, removal, measurement, and transport of drainage waters to the Salton Sea), hydroelectric power, and energy services. IID provides agricultural water to approximately 475,000 acres of some of the most intensively farmed land in the nation. Approximately 97 percent of its water delivery is for agricultural operations.

To improve system efficiencies, IID currently uses 11 independent regulating reservoirs to level out the variability in water supply and demand. The Quantification Settlement Agreement (QSA) completed in 2003 enabled California to implement major Colorado River water conservation and agricultural to urban transfer programs, stabilizing water supplies for a minimum of 35 years and up to 75 years under existing agreements. The QSA enables the state of California to live within its 4.4 million acre-foot entitlement of Colorado River water. The QSA includes water conservation/transfer and exchange projects among IID, including San Diego County Water Authority (SDCWA), Coachella Valley Water District (CVWD), and Metropolitan Water District of Southern California (MWD). The Proposed Project is a mechanism to increase water management efficiency and thus the water supply available to the IID for local or transfer needs in accordance with the QSA.

ES.3.2 Project Summary

The Proposed Project includes a single cell reservoir facility, covering approximately 440 acres, within a 591-acre Project footprint, inclusive of an intake channel. The Project would have an approximate 2,100 acre-foot capacity and manage up to 365,000 acre-feet of water annually. The water managed in the proposed reservoir would then gravity flow into the East Highline Canal, one of three main canals (all owned and operated by IID) that branch off the AAC, a facility owned by the United States Department of the Interior through Reclamation. The Proposed Project also includes an intake channel, which would branch off the AAC Reach that merges into the East Highline Canal. The intake channel would have a new proposed right-of-way (ROW),

approximately two miles in length, to convey the operational water flows from the AAC Reach through culverts, an open channel and to the proposed reservoir at a flow rate of up to 1,500 cubic feet per second (cfs). Stored water would be delivered through an automated gate outlet and structure with a gravity flow capacity of approximately 1,500 cubic feet per second for delivery into the East Highline Canal. Two potential staging areas are anticipated in the northwest and northeast portions of the Proposed Project site within 35 acres of IID owned land. A third staging area was assessed but unlikely to be necessary along the southern section of the intake channel.

ES.3.3 Proposed Project Objectives

The purpose of the Proposed Project is to maximize IID's current levels of operational flexibility while creating an additional tool to assist in meeting main-system and on-farm conservation program goals consistent with IID's Water Conservation Plan, thus augmenting IID's available water supply. The Project is also consistent with the State of California's water conservation objectives established under Executive Order B-37-16 and the Reclamation Reform Act. The Project objectives are as follows:

- The Project will increase delivery flexibility and provide conservation opportunities within the district to accommodate in-valley water demand. These efforts are consistent with the objectives set forth in IID's 2021 Water Conservation Plan. Mid lateral and off-line reservoirs are an integral part of the IID System Conservation Program.
- The Project will help support IID's 12-Hour Delivery Program via maximized operational storage capacity and flexibility, enabling farmers to match crop water requirements and conserve water. The reservoir will help balance supply-demand mismatches due in part to conveyance travel time, peak demands, unavailable storage, and rain events.
- The Project will provide consistency with the 2018 California Water Plan goals: Goal 2-Strengthen Resiliency and Operational Flexibility of Existing and Future Infrastructure; Goal 4-Empower California's Under-Represented and Vulnerable Communities; and, Goal 6-Support Real-time Decision-making, Adaptive Management, and Long-term Planning.
- The Project will be in support of the Reclamation Reform Act of 1982 to " . . . encourage . . . consideration and incorporation of prudent and responsible water conservation measures . . .by . . . recipients of irrigation, municipal and industrial water . . ."

The specific project design objectives are described below.

- Optimal reservoir placement that will benefit the greatest number of downstream IID water users and on-farm water conservation efforts.
- Utilize a route with the most beneficial hydrologic conditions to accommodate gravity flow (i.e., avoiding/minimizing pumping).
- Minimize the length of the intake channel and the outflow channel to the East Highline Canal.

- Minimize displacement of existing IID and farming infrastructure.

ES.3.4 Required Permits and/or Approval

Implementation of the Proposed Project would require discretionary approvals by federal, state and local agencies, including but not limited to those shown in Table ES-1. Discretionary approvals would include certification of the Final EIR under CEQA, and approval and adoption of the Proposed Project by IID. Table ES-1 identifies approvals that are or may be necessary.

Table ES-1
Project Approvals

Authorizing Jurisdiction or Agency	Action
U.S. Bureau of Reclamation	Issuance of a license
State Water Resources Control Board	Construction General Permit (NPDES/SWPPP)
California Department of Transportation	Approval of Encroachment Permit/Temporary Detour SR-86
California Regional Water Quality Control Board	Clean Water Act Section 402 Permit NPDES Certification
Imperial County Public Works Department	Road Abandonment of Holdridge Road Holdridge Road Realignment Design Approval
Imperial County Air Pollution Control District	Approval of Authority to construct and/or permits to operate; Approval of Enhanced Dust Control Plan

Notes: SWPPP= Storm Water Pollution Prevention Plan; NPDES = National Pollutant Discharge Elimination System

ES.4 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table ES-2 provides a summary of the impact analysis related to the Proposed Project, including potential significant environmental impacts expected to result from the Proposed Project pursuant to CEQA Guidelines Section 15123(b)(1). For more detailed discussion, please see Chapter 4, Environmental Analysis, of this EIR. Table ES-2 also lists the applicable mitigation measures related to the identified significant impacts, as well as the level of significance after mitigation is identified. As stated in Chapter 2, Environmental Setting, of this Draft EIR, the Initial Study prepared and circulated with the Notice of Preparation (NOP) for public review on the Proposed Project concluded that the Proposed Project would not result in significant impacts to aesthetics, agricultural and forestry, energy, geology and soils, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, utilities and service systems or wildfire. As a result, these topics are not addressed in the EIR and not summarized in Table ES-2.

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
Air Quality		
Would the project conflict with or obstruct implementation of the applicable air quality plan?	**MM-AQ-1 Fugitive PM_{10} Dust Control Mitigation Measures** Prior to issuance of a grading or building permit, the Project proponent shall submit an enhanced dust control plan to the Imperial County Air Pollution Control District for review and approval to ensure Project compliance with ICAPCD Regulation VIII (Fugitive Dust Regulations), Rules 800 through 806. The plan shall address construction-related dust as required by ICAPCD, including, but not limited to the following: • Water exposed soil with adequate frequency for continued moist soil. • Replace ground cover in disturbed areas as quickly as possible. • Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site. **MM-AQ-2 ICAPCD Standard Measures for PM_{10} Dust Control** Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII-Fugitive Dust Control Measures. These mitigation measures listed below, in addition to any measures identified under an enhanced dust control plan, shall be implemented prior to and during construction. The Imperial County Department of Public Works will verify implementation and compliance with these measures. **ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control** 1. The operator shall insure that all disturbed areas, including bulk material storage which is not being actively utilized, will be effectively stabilized and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover. 2. The operator shall insure that all on-site and off-site unpaved roads will be effectively stabilized and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering. 3. The operator shall insure that all unpaved traffic areas with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions will be limited	Less than significant

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering. 4. The operator shall insure that all transport (import or export) of borrow materials used as cover material will be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of burrow material. In addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material. 5. The operator shall insure that all track-out or carry-out will be cleaned at the end of each workday. 6. The operator shall insure that all movement of borrow material handling or at points of transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line. **ICAPCD Standard Measures for Construction Combustion Equipment** 1. The operator shall insure the use of Tier 2 vehicles or the equivalent of alternative fueled or catalyst equipped diesel construction equipment. 2. The operator shall insure that idling will be minimized by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum. 3. The operator shall limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use. 4. The operator shall, where practicable, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). **Enhanced Mitigation Measures for Construction Combustion Equipment** • Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways. • Implement activity management (e.g., rescheduling activities to reduce short-term impacts).	

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Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?	**MM-AQ-1** and **MM-AQ-2** (see above)	Less than significant
Would the project result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors)?	**MM-AQ-1** and **MM-AQ-2** (see above)	Less than significant
Would the project expose sensitive receptors to substantial pollutant concentrations?	**N/A**	No Impact
Would the project create objectionable odors affecting a substantial number of people?	**N/A**	No Impact
Biological Resources		
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 (CDFG) or U.S. Fish and Wildlife Service (USFWS)?	**MM-BIO-1: General Avoidance and Minimization Measures** The following avoidance and minimization measures shall be implemented during project construction and operations and maintenance. These measures have been organized into subcategories for ease of reading. **Work Hours** **1.** Construction and operations and maintenance activities within 50 feet of the outside edge of the construction zone or work area containing habitat for special-status wildlife will be prohibited between sunset and sunrise, and all construction-related or	Less than significant

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	maintenance-related lighting will be turned off during that period, with the exception of lighting for maintenance during operations and maintenance and emergencies (defined as an imminent threat to life or significant property) activities. If necessary, lighting for maintenance during operations and maintenance and emergencies within 50 feet of habitat for special-status wildlife will be directed away **from natural areas.** **Debris/Non-native Vegetation/Pollution** • Fully covered trash receptacles that are animal-proof will be installed and used during construction to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles will be removed at least once a week from the Proposed Project site. • No litter, construction materials, or debris will be discharged into state-jurisdictional waters. • Construction work and operations and maintenance areas shall be kept clean of debris, such trash, and construction materials. **Vehicle and Equipment Restrictions and Maintenance** • Night-time construction should be minimized to the extent possible. However, if night-time activity (e.g., equipment maintenance) is necessary, then the speed limit shall be 10 mph. • Vehicle operation within state-jurisdictional waters when surface water is present will be prohibited. Any equipment or vehicles driven and/or operated within or adjacent to a state-jurisdictional channel will be checked and maintained by the operator daily to prevent leaks of oil or other petroleum products that could be deleterious to aquatic life if introduced to the watercourse. • During construction, vehicles and equipment access will be limited to the identified impact areas, and ingress and egress will be limited to existing roads. During operations and maintenance, vehicles and equipment will be limited to maintenance access roads and the minimal area necessary to perform the work. **2.** Staging and storage areas for spoils, equipment, materials, fuels, lubricants, and solvents will be located outside the state-jurisdictional channels and within the designated impact area. Stationary equipment, such as motors, pumps, generators, compressors, and welders, located within or adjacent to state-jurisdictional waters shall	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	be positioned over drip-pans or other containment. Prior to refueling and lubrication, vehicles and other equipment shall be moved away from the state-jurisdictional channels. ***Other Restrictions on Activities and Personnel*** • No pets, such as cats or dogs, should be permitted on the Proposed Project site during construction or operations and maintenance. **3.** Any contractor, employee, or agency personnel who is responsible for inadvertently killing, injuring, or trapping a listed species shall immediately report the incident to the project biologist during construction and the operations manager during operations and maintenance. The project biologist or operations manager shall contact the USFWS (for federal Endangered Species Act species) and CDFW (for California Endangered Species Act species) immediately in the case of a dead, injured, or entrapped listed species. The Sacramento USFWS Office and CDFW shall be notified in writing within 3 working days of the accidental death or injury to a listed species during project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS office that covers Imperial County is located at 2177 Salk Avenue, Suite 250, Carlsbad, California 92008, 760.431.9440. The CDFW Inland Desert Region office is located at 3602 Inland Empire Boulevard, Suite C-220, Ontario, California 91764, 909.484.0167. **4.** To prevent inadvertent entrapment of special-status wildlife during construction, all excavated wells, steep-walled holes or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day, or be provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped wildlife. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. **5.** All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for special-status wildlife or nesting birds before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved until the project biologist has been	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by the project biologist. If a federally or state-listed species is discovered, that section of pipe shall not be moved until the USFWS and/or CDFW has been consulted. If necessary, under the direct supervision of the project biologist, the pipe may be moved once to remove it from the path of construction activity until the species has escaped. **MM-BIO-2**: **Environmental Awareness Training, Biological Monitoring, and Compliance** **Worker Environmental Awareness Program and Ongoing Training** Prior to the initiation of any on-site grading, all construction/contractor personnel working on site must complete training through a Worker Environmental Awareness Program (WEAP). New construction workers engaged in construction activities (e.g., grading, utility installation, etc.) shall complete WEAP training within the first week of deployment on the site. Additionally, operational staff shall complete WEAP training prior to deployment on the site. The training shall include the following: • Provide the training materials for WEAP training. These materials shall include the measures and mitigation requirements for protected plant and wildlife species (e.g., avoidance and buffer requirements, night-time construction limitations, etc.); and the location and mitigation requirements for waters of the state. WEAP training will also include driver training to avoid and minimize collision risks with protected species, and reporting protocols in the event that any dead or injured wildlife are discovered. • Copies of mitigation measures and permits from resource agencies, such as the CDFW and Regional Water Quality Control Board (RWQCB), will be made available. **Biological Monitoring and Compliance Documentation** The project biologist shall perform the biological monitoring and compliance documentation for the project during construction, including the following: • Prior to the initiation of any on-site grading, the project biologist will document that required pre-construction surveys and/or relocation efforts have been implemented. • The project biologist will periodically monitor activities during initial grading.	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	• The project biologist will note any evidence of trash or microtrash and, if present, communicate the presence and requirement to remove the trash to the construction manager. **MM-BIO-3**: **Burrowing Owl Surveys and Avoidance/Relocation**. No less than 14 days prior to ground-disturbing activities (vegetation clearance, grading), a qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction take avoidance surveys on and within 200 meters (656 feet) of the construction zone to identify occupied breeding or wintering burrowing owl burrows. The take avoidance burrowing owl surveys shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 Staff Report; CDFG 2012) and shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any burrows with fresh burrowing owl sign or presence of burrowing owls. As each burrow is investigated, biologists shall also look for signs of American badger and desert kit fox. Copies of the burrowing owl survey results shall be submitted to the CDFW. If burrowing owls are detected on site, no ground-disturbing activities shall be permitted within 200 meters (656 feet) of an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the nonbreeding season (September 1 to January 31), ground-disturbing work can proceed near active burrows as long as the work occurs no closer than 50 meters (165 feet) from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	If avoidance of active burrows is infeasible during the nonbreeding season, then, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping, a qualified biologist shall implement a passive relocation program in accordance with Appendix E (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation (CDFG 2012). Passive relocation consists of excluding burrowing owls from occupied burrows and providing suitable artificial burrows nearby for the excluded burrowing owls. A burrowing owl monitoring and mitigation plan will be prepared that outlines how passive relocation would occur and where the replacement burrows would be constructed. It would also outline the monitoring and maintenance requirements for the artificial burrows. **MM-BIO-4: Southwestern Willow Flycatcher and Nesting Bird Pre-construction Surveys and Avoidance Plan.** This measure would protect these nesting special-status species and more common species protected under the Migratory Bird Treaty Act (MBTA), which prohibits the "take" of any migratory bird or any part, nest, or eggs of any such bird. The MBTA applies to over 800 species of birds, including rare and common species. Burrowing owl is addressed separately in a species-specific biological resource protection measure (MM-BIO-3). The project biologist shall conduct pre-construction surveys no earlier than 7 days prior to any on-site grading and construction activities within each construction area and a 500-foot buffer that occurs during the nesting/breeding season of special-status bird species potentially nesting on the site, with the exception of burrowing owl, which is addressed in MM-BIO-3. The pre-construction surveys shall be conducted between March and September, or as determined by the project biologist.	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	The purpose of the pre-construction surveys will be to determine whether occupied nests are present in the construction zone or within 500 feet of the construction zone boundary. If occupied nests are found, then limits of construction to avoid occupied nests shall be established by the project biologist in the field with flagging, fencing, or other appropriate barriers (e.g., 250 feet around active passerine nests to 500 feet around active non-listed raptor nests), and construction personnel shall be instructed on the sensitivity of nest areas. The project biologist shall serve as a construction monitor during those periods when construction activities are to occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). Once a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, construction may proceed in the setback areas. **MM-BIO-5: Desert Tortoise Surveys and Avoidance Plan.** Although the Project site has not habitat value for the Desert Tortoise, the proposed Project occurs within the range of desert tortoise. IID will complete protocol level surveys, out of an abundance of caution, over all areas proposed to be directly or indirectly affected by the Project, using appropriately qualified biologists, according to protocols in Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise (USFWS 2019). IID will work with CDFW and USFWS concurrently. **MM-BIO-6 Flat-tailed horned lizard and Colorado Desert fringe-toed lizard Avoidance and Minimization Measures.** The FTHL was not present during any of the focused surveys. Focused surveys were not conducted for the CDFTL, but they were not observed during the FTHL focused surveys. Although the Project Area does not contain suitable habitat for the FTHL and CDFTL, protocol surveys will be implemented out of an abundance of caution and, removal in consultation with wildlife agencies will occur as follows: 1. Pre-Construction Survey and Monitoring: A qualified biological monitor will survey for FTHL and CDFTL prior to ground disturbing work within suitable habitats (identified as creosote bush scrub, creosote bush-white bursage, and white bursage scrub	

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	vegetation communities). To the extent feasible, methods to find both species will be designed to achieve a maximal capture rate and will include, but not be limited to, using strip transects, tracking, and raking around shrubs. Prior to construction, the minimum pre-construction survey effort will be 30 minutes per 0.40 hectare (1 acre). 2. If any FTHL or CDFTL is observed during construction activities, individuals will be relocated adjacent to the Project area in accordance with the Fencing and Removal Survey Protocols (Appendix 7 of the Flat-tailed Horned Lizard Interagency Coordinating Committee). Biologists that handle lizards will first obtain all necessary permits and authorization from the CDFW. Any FTHL or CDFTL relocation will include: a. Accurate records maintained by the biological monitor(s) for each relocated lizard including sex, snout-vent length, weight, air temperature, location, date, time of capture and release, a close-up photo of the lizard, and a photo of the habitat where it was first encountered. To the extent feasible, a sample of the lizard scat will be collected. A Horned Lizard Observation Data Sheet and a Project Reporting Form, from Appendix 8 of the Flat-tailed Horned Lizard Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003) will be completed. During construction, quarterly reports describing lizard removal activity will be submitted to the IID and CDFW. b. The removal of lizard(s) out of harm's way, including those found on access or maintenance roads, will include their relocation to nearby suitable burrowing habitat away from proposed Project components and roads. Any relocated FTHL or CDFTL will be placed in the shade of a large shrub in undisturbed habitat. The Project Biologist or biological monitor will be allowed some judgment and discretion when relocating lizards to maximize survival of lizards found on the proposed project site.	
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.	**MM-BIO-1, MM-BIO-2** (above) and **MM-AQ-1 and MM-AQ-2** (see previous). **MM-BIO-7:** To comply with the state regulations for impacts to "waters of the State," the need for the following agency permits and/or agreements will be verified:	Less than significant

Table ES-2
Summary of Environmental Impacts of the Proposed Project

Environmental Topic	Mitigation Measures and Project Design Features	Level of Significance After Mitigation
	1. A Clean Water Act, Section 402 permit issued by the California RWQCB for all project-related disturbances of waters of the state and/or associated wetlands. 2. A Section 1602 Streambed Alteration Agreement issued by the CDFW for all project-related disturbances of any streambed. **MM-BIO-8:** IID will restore and enhance sensitive, riparian and wetland communities to mitigate for permanent impacts to 0.15 acres of arrow weed thickets and 0.21 acres of cattail marshes at a 1:1 mitigation ratio. This mitigation acreage will be augmented nearby at the beginning of All-American Drain 2/2A which extends further east.	
Cultural Resources		
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**MM-CR-1 Cultural Resources Avoidance and Monitoring** **Prior to Start of Construction, IID will** 1. Retain a Qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for archeology to oversee the execution of all mitigation measures related to archaeological and historic resources; 2. Preserve in place, via avoidance of resources, the archaeological sites identified; IID shall establish a 300-foot environmentally sensitive area with a maximum encroachment of 250-feet for barrier fencing for the protection of the archaeological sites; 3. Extend an invitation to the interested and affiliated tribes to be present during ground-disturbing activities that are proposed to occur on federal lands; 4. Conduct a Worker's Environmental Awareness Program (WEAP) training for archeological sensitivity and tribal cultural sensitivity for construction personnel for any ground disturbing activities on federal land; 5. If archaeological resources are encountered during ground-disturbing activities, the stipulations of 36 CFR 800.13(b)(3) and 36 CFR 800.13(c) shall apply. All activities within the immediate area of the discovery shall cease and measures shall be taken to secure and protect the discovery. Immediate telephone notification shall be made to the Environmental Group Manager at the Reclamation's Yuma Area Office (928) 343-8100/ The activity may resume only after Reclamation has authorized a continuance.	Less than significant

Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	**MM-CR-2 Discovery of Human Remains** If human remains are discovered, work shall halt in that area and no soil shall be exported off site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken: 1. **Notification** – the Qualified Archaeologist shall notify IID and Reclamation immediately, followed by a call the Medical Examiner. 2. **Isolate Discovery**- Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner. 3. **Field Examination** - If a field examination is not warranted, the Medical Examiner will determine with input from Reclamation, if the remains are or are most likely to be of Native American origin. 4. **Native American Human** Remains - If human remains ARE determined to be Native American: a. The Medical Examiner will notify the NAHC within 24 hours; b. NAHC will immediately identify the person or persons determined to be the Most Likely Descendant (MLD) and provide contact information; c. The MLD will contact the Qualified Archaeologist within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Code; d. The MLD will have 48 hours to make recommendations to IID and Reclamation, for the treatment or disposition with proper dignity, of the human remains and associated grave goods; e. Disposition of Native American Human Remains will be determined between the MLD and the Qualified Archaeologist if NAHC is unable to identify MLD. 5. **Not Native American Human Remains -** If Human Remains are NOT Native American, the Qualified Archaeologist will contact the Examiner and notify them of the historic era context of the burial; the Medical Examiner will determine appropriate course of action (PRC 5097.98)	Less Than Significant
Hazards and Hazardous Materials		
Would the project create a significant hazard to the public or the environment	**MM-HAZ-1 Soil sampling shall be implemented prior to construction activities.** Due to past uses for agriculture, prior to grading activities, soil shall be sampled and analyzed for metals and residual pesticides. Sampling shall be conducted in accordance with California DTSC	Less than significant

through the routine transport, use, or disposal of hazardous materials?	guidance documents. The soil testing will confirm the presence or absence of on-site contamination associated with past uses on the project site. Any soils qualifying as hazardous waste shall delineated, removed, and properly disposed of off-site. Any soil that exceeds the California Human Health Screening Levels shall be either remediated on site to levels protective of human health or removed and properly disposed of off-site. Should contaminants be identified, a qualified Reclamation Hazardous Materials Specialist for the project shall be retained to ensure appropriate remediation is conducted and completed in accordance to the regulations specific to the contaminants identified. **MM-HAZ-2 Hazardous Material Contingency Plan.** A hazardous materials contingency plan shall be developed and followed during demolition, excavation, and construction activities for the Project. Site workers shall be familiar with the hazardous materials contingency plan and should be fully trained on how to identify suspected contaminated soil. The hazardous materials contingency plan shall include, at a minimum, the following: • Identification of known areas with hazardous waste and hazardous materials of concern • Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern • Procedures for restricting access to the contaminated area except for properly trained personnel • Procedures for notification and reporting, including internal management and local agencies (e.g., Imperial County Fire Department, Imperial County Public Health Division), as needed • Health and safety measures for removal and excavation of contaminated soil • Procedures for characterizing and managing excavated soils • Procedures for certification of completion of remediation **MM-HAZ-3 Material Storage During Construction.** During construction, if aggregate aboveground oil/fuel storage capacity is greater than 1,320 gallons (or completely buried 42,000 gallons) and there is a reasonable expectation of an oil discharge into or upon navigable waters of the United States, a spill prevention, control, and countermeasures (SPCC) plan pursuant to 40 CFR 112 (or, for small quantities, a spill prevention and response plan) shall be prepared prior to and implemented during construction. The SPCC plan (or spill prevention and response plan) shall identify best management practices for spill and release prevention and provide procedures for cleaning up and disposing of any spills or releases. See Air Quality Mitigation Measures **MM-AQ-1** and **MM-AQ-2**	

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?	**MM-HAZ-1**, **MM-HAZ-2,** and **MM-HAZ-3** (see above) See Air Quality Mitigation Measures **MM-AQ-1** and **MM-AQ-2**	
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?	**N/A**	No impact
Would the project be located on a site that 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?	**N/A**	No impact
Would the project be 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 for people residing or working in the project area?	**N/A**	No impact
Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**N/A**	No impact
Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**N/A**	No impact
Hydrology and Water Quality		
Would the project violate any water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality?	**N/A**	Less than significant

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	**N/A**	No impact
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, through the addition of impervious surfaces in a manner which? i. Result in substantial erosion or siltation on- or off-site? ii. Substantially increase the rate of amount of surface runoff in a manner which would result in flooding on- or off-site 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?	**i. N/A** **ii. N/A** **iii. N/A** **iv. N/A**	No impact
In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	**N/A**	No impact
Conflict with or obstruct implementation of a water quality control plan or sustainable management plan?	**N/A**	No impact
Tribal Cultural Resources		
Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code §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	**MM-CR-1 Cultural Resources Avoidance and Monitoring** **Prior to Start of Construction, IID will** 1. Retain a Qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for archeology to oversee the execution of all mitigation measures related to archaeological and historic resources; 2. Preserve in place, via avoidance of resources, the archaeological sites identified; IID shall establish a 300-foot environmentally sensitive area with a maximum	Less than significant

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 Public Resources Code Section 5020.1(K), or**	encroachment of 250-feet for barrier fencing for the protection of the archaeological sites; 3. Extend an invitation to the interested and affiliated tribes to be present during ground-disturbing activities that are proposed to occur on federal lands; 4. Conduct a Worker's Environmental Awareness Program (WEAP) training for archeological sensitivity and tribal cultural sensitivity for construction personnel for any ground disturbing activities on federal land; 5. If archaeological resources are encountered during ground-disturbing activities, the stipulations of 36 CFR 800.13(b)(3) and 36 CFR 800.13(c) shall apply. All activities within the immediate area of the discovery shall cease and measures shall be taken to secure and protect the discovery. Immediate telephone notification shall be made to the Environmental Group Manager at the Reclamation's Yuma Area Office (928) 343-8100/ The activity may resume only after Reclamation has authorized a continuance.	
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 Resource Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**MM-CR-1** (See above)	Less than significant

Notes: ICAPCD = Imperial County Air Pollution Control District; AVR = average vehicle ridership; N/A = not applicable.

ES.5 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Section 15123(b) (2) of the CEQA Guidelines requires that areas of controversy known to the lead agency be stated in the EIR summary. To determine the number, scope, and extent of the environmental topics to be addressed in this EIR, IID prepared an NOP and Initial Study and circulated the NOP and Initial Study to interested public agencies, organizations, and individuals in order to receive input on the Proposed Project. During the NOP comment period, which commenced on October 9, 2023 and closed on November 10, 2023, four comment letters were received by IID. Comments were received by the Native American Heritage Commission, Imperial County Air Pollution Control District, California Department of Transportation and California Department of Fish and Wildlife.

ES.6 SUMMARY OF PROJECT ALTERNATIVES

Section 15126.6 of the CEQA Guidelines identifies the parameters within which consideration and discussion of alternatives to the Project should occur. Alternatives are to include those that are reasonably feasible and would attain most of the basic objectives of the project. Alternatives should be capable of avoiding or substantially lessening any significant effects of the project. The rationale for selecting the alternatives to be evaluated and a discussion of the No Project Alternative are also required.

A reasonable range of alternatives were considered during the preliminary planning stages but rejected based on screening criteria used to evaluate alternatives during the early planning stages. Alternatives considered and rejected included Site Locations Alternative, Multiple Smaller Reservoirs Alternative, Larger Sized Reservoir Alternative and Intake Channel Route Alternatives. Section 3.4.1 of this Draft EIR provides the rationale for excluding them from moving forward with further analysis in this EIR.

The EIR identifies three project alternatives developed during the conceptual planning phase of the Proposed Project for analysis.

- **No Project Alternative.** This alternative is required by CEQA, and it compares the present existing condition of the Proposed Project site against the significant impacts that would result from implementation of the Proposed Project. Under this alternative, the existing agricultural would continue to be farmed, and similar to the surrounding agricultural uses, the site would continue receiving water supplies by diverting water from the East Highline Canal and the AAC.
- **Larger Size Reservoir Alternative.** Under this alternative, a 3,400 acre-foot capacity reservoir would be constructed over approximately 340 acres of agricultural land for basin with a higher 15-foot embankment. Compared to the proposed 2,100 acre-foot capacity reservoir basin with a maximum 6-foot, the Larger Capacity Reservoir would be

approximately 100 acres smaller, require deeper excavation and be supported by higher embankments.

- **Intake Channel Route Alternatives.** The intake route alternatives would entail the proposed reservoir basin in the same placement; however, the intake route would be routed directly to the AAC and be located further east of where the intake is routed under the proposed project, through private and public land. All of the intake route alternatives would require a temporary reroute of SR-98 during intake channel construction activities.

Table ES-3 provides a summary of the impacts of each alternative as it compares to the Proposed Project. The Larger Sized Reservoir Alternative would result in similar types of potentially significant impacts as the Proposed Project, however, the impacts would be at an increased severity due to the Larger Capacity of this alternative. The Alternative Intake Routes Alternative would potentially increase the significance of impacts related to biological resources, cultural resources and transportation and traffic.

The No Project Alternative, in comparison, would result in no potentially significant impacts. However, the No Project Alternative would not meet any of the project objectives. Of the other project alternatives, the Larger Capacity Reservoir Alternative is the environmentally superior alternative because it would result in similar impacts compared to the Proposed Project in a reduced project footprint. However, the Larger Capacity Reservoir with its higher embankments may pose a flood risk as determined by the Department of Water Resources, Division of Safety of Dams.

Table ES-3
Alternatives Matrix – Impacts Comparison

Environmental Issue	Proposed Project	No Project Alternative	Larger Sized Reservoir Alternative	Alternative Intake Routes Alternative
Aesthetics	Less than significant	Less than Proposed Project, no impact	Increased severity compared to the project, less-than-significant impact	Increased severity compared to the project, less-than-significant impact
Air Quality	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Increased severity compared to the Proposed Project, less-than-significant impact with mitigation	Similar impacts as Proposed Project, less-than-significant impact
Biological Resources	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Less than Proposed Project, less-than-significant impact	Increased severity compared to the project, less-than-significant impact with mitigation incorporated
Cultural Resources	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact with mitigation	Increased severity compared to the project, less-than-significant impact with mitigation incorporated

Table ES-3
Alternatives Matrix – Impacts Comparison

Environmental Issue	Proposed Project	No Project Alternative	Larger Sized Reservoir Alternative	Alternative Intake Routes Alternative
Geology and Soils	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Greenhouse Gases	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Hazards and Hazardous Materials	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact with mitigation incorporated	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Hydrology and Water Quality	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Mineral Resources	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Noise	Less than significant	Less than Proposed Project, no impact	Less than Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Public Services	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Transportation/ Circulation	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Utilities and Service Systems	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Meets Most of the Basic Project Objectives?	Yes	No	Yes	Yes

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CHAPTER 1
INTRODUCTION

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APPENDICES

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CHAPTER 1
INTRODUCTION

This Draft EIR addresses the environmental impacts that could result from implementing the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project). The Draft EIR was prepared in accordance with CEQA to inform the public and meet the needs of local, state, and federal permitting agencies.

The Imperial Irrigation District (IID) is the lead agency under CEQA, since the district is responsible for primarily carrying out the full Project. IID, as the lead agency has directed and supervised the preparation of this Draft EIR and has independently evaluated its information and findings. The County of Imperial (County) is the land use authority and would have to approve the abandonment of Holdridge right-of-way (ROW) within the Project footprint and related discretionary permits. Reclamation is the federal agency that would have to approve a new ROW for the intake channel that crosses a parcel of Bureau of Land Management (BLM) lands withdrawn to Reclamation.

1.1 PROJECT LOCATION AND REGION OF INFLUENCE

The project's region of influence comprises the areas that would be affected by the Proposed Project. Based on the locations of the Project components, the Project's region of influence consists of the immediate area around the Proposed Project site, including farming activities in the Imperial Valley, BLM lands to the east, and the broader IID irrigation and drainage system. Figure 1-1, Regional Project Location, identifies the project's region of influence, distinguishing the immediate from the broader regions. Figure 1-2, Project Vicinity Map, identifying the project footprint and immediate surroundings. See Chapter 2, Environmental Setting, for more detail on the existing site conditions and surrounding land uses.

1.1.1 Lower Colorado River

The Lower Colorado River (LCR) covers over 202,000 square miles of the west with a focus on the lower 688 river miles of the Colorado River system from Lee's Ferry in northern Arizona to the border with the Republic of Mexico (Reclamation 2018). The Proposed Project would redirect a portion of IID's Colorado River water entitlement already channeled through the All-American Canal (AAC) to the Proposed Project site, via the AAC Reach, for temporary storage. Section 1.4, Other Proposed Projects Related to Resources Affected by the Proposed Project, provides an overview of the allocation of Colorado River water among water rights holders in California and the key LCR diversion facilities.

1.1.2 IID Water Service Area and All-American Canal

IID is a limited-purpose public agency, formed under the laws of the State of California. IID holds senior rights to divert water from the Colorado River and deliver it to farmers, tenants, and landowners within its water service area in Imperial County. IID provides agricultural water to approximately 475,000 acres of some of the most intensively farmed land in the nation. IID does not have authority to approve or disapprove land use, water use, or crop selection by farmers. IID's operational activities are associated with irrigation, drainage, hydroelectric power, and energy services.

Irrigation

To deliver water to its service area, IID first diverts water from the Colorado River at Imperial Dam. This water is conveyed through the 82-mile AAC and into three main canals serving the Imperial Valley. These primary canals (East Highline, Central Main and Westside Main) branch off the AAC as it moves across the southern portion of the Imperial Valley. The main canals supply water to numerous canals and laterals throughout IID's water service area. All canals and laterals are owned and operated by IID.

In total, IID operates and maintains a gravity flow water delivery system consisting of approximately 1,667 miles of main canals and lateral canals, including approximately 1,136 miles of concrete-lined canals, approximately 504 miles of unlined earthen canals and 27 miles of piped conveyance (IID 2019). To improve system efficiencies, IID currently uses 11 independent regulating reservoirs to level out the variability in water supply and demand. The supply of water must be ordered from Parker Dam one week in advance; the quantity is based on the estimated demand. Actual demand is affected by weather conditions.

Drainage

IID's drainage operations include collection, conveyance, measurement, and discharge of drainage water through IID's main and lateral drain system to the New and Alamo Rivers and the Salton Sea. IID operates an extensive, 1,456, gravity flow agricultural drainage system. There are also thousands of miles of subsurface drains (or tile drains) which are owned by Imperial Valley farmers, and associated collection pipelines and water recovery systems. As with the canal system, the drain system is composed of main and lateral drains.

1.2 BACKGROUND

This section provides the background and history of the Proposed Project, including an overview of the allocation of Colorado River water among water rights holders in California and the key LCR diversion facilities.

1.2.1 Colorado River

From its headwaters in the Rocky Mountains of Colorado, the Colorado River flows southwest for 1,470 miles to the Gulf of California in Mexico. It drains an area of approximately 242,000 square miles, and the river or its tributaries travel through parts of seven Colorado River Basin (Basin) states in the United States (U.S.). The Colorado River is also the international boundary between the U.S. and Mexico for approximately 17 miles between Arizona and Mexico. From the international boundary, it travels southward to form the boundary between the Mexican states of Baja California and Sonora before flowing into the Gulf of California.

The Upper Basin includes portions of Arizona, Colorado, New Mexico, Utah and Wyoming; the Lower Basin consists of portions of Arizona, California, Nevada and New Mexico. The dividing point between the Upper and Lower Basins, as defined in the Colorado River Compact of 1922, is at Lee's Ferry, Arizona, approximately 17 miles downstream of Glen Canyon Dam.

Two reservoirs—Lake Powell (behind Glen Canyon Dam) in the Upper Basin and Lake Mead (behind Hoover Dam) in the Lower Basin—have a combined active storage capacity of approximately 51 million acre-feet. Additional facilities on the Colorado River with relevance to California include the Davis, Parker, Headgate Rock, Palo Verde, Imperial, and Laguna Dams. Palo Verde Dam serves as the Colorado River diversion structure for irrigated agriculture in eastern Riverside County, California, and the Imperial Dam serves as the Colorado River diversion structure for the AAC in California, which supplies water to IID, CVWD, and the Gila Gravity Main Canal in Arizona (IID 2002).

1.2.2 Quantification Settlement Agreement

In 1999, the California Colorado River Water Use Plan was drafted to outline the state's proposed plan to maintain its use of Colorado River water at 4.4 million acre-feet per year. Key components of the plan were used as the framework for the Quantification Settlement Agreement (QSA) completed in 2003. The QSA enabled California to implement major Colorado River water conservation and transfer programs, stabilizing water supplies for a minimum of 35 years and up to 75 years and reducing the state's demand on the Colorado River to its 4.4 million acre-foot entitlement. The QSA includes water conservation/transfer and exchange projects between and among the involved parties. The QSA provides part of the mechanism for California to reduce its water diversions from the Colorado River in normal years to its apportioned amount of 4.4 acre-feet per year under the California Plan. The implementation of the QSA, which includes water conservation and water transfers from agricultural use to principally urban use, would result in a net reduction of Colorado River diversions to California from its historic use. The water agencies that are affected by the implementation of the QSA are the participating agencies: CVWD, IID, MWD, State of

California, SDCWA, and U.S. Department of the Interior (SDCWA 2018). As implemented through the QSA, the IID to SDCWA transfer would be limited to 200,000 acre-feet per year with an additional up to 103,000 acre-feet per year transferred to CVWD, except after 2048 at which time MWD will provide CVWD 50,000 acre-feet per year.

1.3 CEQA/NEPA DOCUMENTATION RELATED TO THE PROJECT

This section describes closely related water resources management actions and programs affecting the allocation and distribution of Colorado River water. These actions and programs have undergone environmental review. Actions and programs listed below may contribute to cumulative impacts in combination with those of the Proposed Project; these are further assessed in Chapter 6, Other CEQA Considerations.

1.3.1 Water Conservation and Transfer Project and Habitat Conservation Plan EIR

IID certified an EIR for the Water Conservation and Transfer Project and Habitat Conservation Plan in 2002, which evaluated the environmental impacts from water conservation measures and transfer transaction together. The Water Conservation and Transfer Project would conserve and transfer up to 300,000 acre-feet per year of Colorado River water, from the IID water service area, which IID is otherwise entitled to divert for use within IID's water service area in Imperial County. The conserved water would be transferred by IID to SDCWA, CVWD, and/or MWD. The IID Water Conservation and Transfer Project and Habitat Conservation Plan Final EIR was amended with the Amended and Restated Addendum to the EIR for the IID Water Conservation and Transfer Project and Habitat Conservation Plan approved in 2003. In 2008, IID prepared a Supplement to the Final EIR that provided additional environmental assessment required to implement the managed marsh complex required by permits and approvals for the Water Conservation and Transfer Project and Habitat Conservation Plan.

1.3.2 Program EIR for the Implementation of the Colorado River Quantification Settlement Agreement

The QSA authorizes a number of diverse programs and activities, including the Water Conservation and Transfer Project. IID, MWD, CVWD, and SDCWA are the co-lead agencies for the preparation, in accordance with CEQA, of the QSA Program EIR (PEIR) (IID 2002). The QSA PEIR is a programmatic assessment of the environmental effects of implementation of the QSA by these California water agencies and provides an overall assessment of the multiple projects included in the QSA.

This Draft EIR will assess, at a project level, the effects of the Proposed Project that would conserve allocated LCR water and manage delivery thereof, within the IID water service area.

Water conservation and water management is consistent with the goals and intent of both the Water Conservation and Transfer Project and Habitat Conservation Plan and the QSA. The Water Conservation and Transfer Project and Habitat Conservation Plan EIR evaluated project-level impacts of implementation regarding the effects of a change in the point of diversion on the Colorado River in order to transfer conserved water to SDCWA or MWD, and the effects of receipt and use of conserved water by SDCWA within the SDCWA Service Area. The effects of receipt and use by MWD within the MWD service area of conserved water transferred from IID to MWD were assessed at a programmatic level in the Water Conservation and Transfer Project and Habitat Conservation Plan EIR. A project-level assessment of MWD's receipt and use of transferred water is set forth in the QSA PEIR.

1.4 OTHER PROPOSED PROJECTS RELATED TO RESOURCES AFFECTED BY THE PROPOSED PROJECT

Lower Colorado River Basin Conservation and Efficiency Program

Prolonged drought and low runoff conditions have led to historically low water levels in Lakes Powell and Mead. Over the last two decades, U.S. Department of Interior leaders have engaged with Basin partners on various drought response operations. The LCR Conservation Program is intended to provide new opportunities for U.S. Bureau of Reclamation to fund system conservation and efficiencies in the Lower Colorado River Basin that lead to durable long-term solutions for the Colorado River System and overall reductions in consumptive use for the benefit of Lake Mead.

The IID Board of Directors, through an agreement with the Bureau of Reclamation, has agreed to conserve up to 250,000 acre-feet a year through 2026 (in addition to its current conservation transfer commitments under the QSA). The Lower Basin Plan proposes California, Arizona and Nevada water users to voluntarily conserve at least 1.5 million acre-feet by the end of the 2024 calendar year and at least 3 million acre-feet over a three-year period 2024-2026. IID proposes to fulfill the conservation commitment through on-farm-efficiency conservation programs, system efficiency and new conservation programs that may be implemented through the end of 2026.

Lower Colorado River Multi-Species Conservation Program

The LCR Multi-Species Conservation Program (LCR MSCP) is a partnership of state, federal, tribal, and other public and private stakeholders with an interest in managing the water and related resources of the LCR Basin. The purposes of the LCR MSCP are as follows:

- Conserve habitat and work toward the recovery of covered species within the historic floodplain of the LCR, pursuant to the federal Endangered Species Act (ESA), and reduce the likelihood of additional species listings under the ESA.

- Accommodate current water diversions and power production and optimize opportunities for future water and power development, to the extent consistent with law.
- Provide the basis for federal ESA and California ESA compliance via incidental take authorizations resulting from the implementation of the first two purposes.

The LCR MSCP covers the mainstream of the LCR from below Glen Canyon Dam to the southerly international boundary with Mexico. Conservation measures focus on the LCR from Lake Mead to the international boundary. The comprehensive program is planned to be implemented over a 50-year period. It addresses future federal agency consultation needs under Section 7 of the federal ESA and non-federal agency needs for approval of incidental take authorization for endangered species under federal ESA Section 10. The LCR MSCP provides long-term federal ESA and California ESA compliance and incidental take authorization for a number of actions affecting the LCR. Reclamation is the implementing agency of the LCR MSCP. The actions covered by the LCR MSCP on a long-term basis include changes in the point of diversion of up to 1,574 acre-feet per year of Colorado River water.

1.5 PROJECT APPROVALS

This Draft EIR was prepared to meet environmental compliance requirements for federal, state and local agencies. IID is the lead agency for CEQA compliance, and Reclamation is the lead agency for National Environmental Protection Act (NEPA) compliance. The lead agencies have directed and supervised the preparation of this Draft EIR and its associated Environmental Assessment (EA) (Appendix A), and have independently evaluated the respective information and findings. Although IID is the agency preparing the environmental documentation and responsible for construction, operation, and maintenance of the Proposed Project, Reclamation is considered the lead agency for NEPA because Reclamation has the authority to make permitting and project approvals.

This environmental process includes a public comment period, during which the public is asked to supply the lead agency with comments on this Draft EIR. During the public comment period, public meetings and/or hearings will be held so that the lead agency can receive the public's oral and written comments. Once the public comment period closes, the lead agency will consider and respond to the comments and produce a Final EIR. Each of the lead and/or responsible agencies described below will review the Final EIR prior to taking action on the project. The federal, state, and local permits and authorizations required for the project are further described below.

1.5.1 Federal

In order to implement the Proposed Project, the following federal agency permits and approvals are required:

- **Implementation Agreement for Construction and Operation.** Reclamation is requested to issue IID an Implementation Agreement (IA) to allow for construction and operation of an intake channel to conveying water from the AAC Reach to the proposed operational water storage reservoir across federal owned land.
- **Federal Endangered Species Act Consultation.** Prior to issuing an IA, Reclamation will consult with the U.S. Fish and Wildlife Service (USFWS) to determine whether the Proposed Project could adversely affect threatened or endangered plants or wildlife.
- **National Historic Preservation Act Section 106 Consultation.** Prior to issuing an IA, Reclamation will consult with the California State Historic Preservation Officer (SHPO) to determine whether the Proposed Action could adversely affect cultural or historic resources.

1.5.2 State

To implement the Proposed Project, the following state agency permits and approvals are required:

- **Section 1602 Streambed Alteration Agreement.** At the time that construction is proposed, the need for a Streambed Alteration Agreement would be requested from the California Department of Fish and Wildlife (CDFW), consistent with Section 1602 of the Fish and Game Code to authorize construction across the 0.4 acres of CDFW wetlands.
- **Section 402 NPDES Certification.** IID shall apply for a Clean Water Act 402 Permit issued by the California Regional Water Quality Control Board (RWQCB) for all project-related disturbances of waters of the state and/or associated wetlands.

1.5.3 Local

To implement the Proposed Project, the following local agency permits and approvals are required:

- **Imperial County Air Pollution Control District Permit.** The Imperial County Air Pollution Control District (ICAPCD) is requested to issue approval of authority to construct and/or permits to operate and to issue approval of an Enhanced Dust Control Plan.
- **Imperial County Vacation of Roadway.** The Imperial County Public Works Department (ICPWD) is requested to issue a ROW abandonment for a section of Holdridge Road which currently runs through the Proposed Project.
- **Imperial County Design/Construction Permit for Roadway Realignment**. The ICPWD is requested to approve design, permit construction and accept new ROW associated with the realignment of Holdridge Road.
- **Imperial County Encroachment Permit**. The ICPWD is requested to approve design, permit construction and accept new ROW/easement across Bornt Road associated with the extension of culvert facilities.

1.6 CONSULTATION AND COORDINATION

1.6.1 Agency Coordination and Consultation

IID coordinated with federal, state, and local agencies and Native American Tribes for the preparation of this Draft EIR; potential concerns have been identified, addressed, and assessed. Ongoing coordination with identified agencies facilitated the environmental review and the approval and permitting process for the Proposed Project. As appropriate, consultation with agencies and Native American Tribes continues. The types of agencies included in the coordination and consultation activities are:

- Agencies and other interested parties that have jurisdiction over the Proposed Project by law.
- Agencies and other interested parties that have special expertise on the environmental issues that should be addressed in the Draft EIR.
- Agencies that are defined as Cooperating Agencies (40 CFR 1508.5) under NEPA or Responsible Agencies (40 CFR 15381) or Trustee Agencies (40 CFR 15386) under CEQA in relation to the Project.
- Federally recognized Native American Tribes whose interests may be affected by the Project.

The following lists the specific agencies that are considered Cooperating and Responsible Agencies for the purposes of this Draft EIR.

Cooperating Agencies

- U.S. Bureau of Reclamation (Reclamation)

Responsible Agencies

- County of Imperial (County)
- Regional Water Quality Control Board (RWQCB)
- California Department of Fish and Wildlife (CDFW)
- U.S. Fish and Wildlife Service (USFW)

1.6.2 Public Scoping

The scoping process for the Proposed Project was designed to solicit input on the issues related to the project description, the scope of the impact analysis, and the project alternatives to be assessed in the Draft EIR from (1) the public; (2) federal, state, and local agencies; and (3) other interested

parties. The CEQA Notice of Preparation was published by the California State Clearinghouse October 4, 2023, and the scoping period lasted until November 10, 2023.

Four comment letters were received by the District.

- Pricilla Torres-Fuentes, on behalf of the **Native American Heritage Commission** (NAHC), submitted a letter dated October 4, 2023, recommending consultation with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the Proposed Project.
- Ismael Garcia, on behalf of the **Air Pollution Control District** (ICAPCD), submitted a letter dated November 7, 2023, providing recommendation for the use of the ICAPCD's CEQA Air Quality Handbook and reiterating need for project compliance with all ICAPCD rules and regulations.
- Rogelio Sanchez, on behalf of the **California Department of Transportation** (Caltrans), District 11 Office, submitted a letter dated November 9, 2023 regarding guidance for special vehicles or equipment hauling within the State Highway network.
- Kim Freeburn, on behalf of the **California Department of Fish and Wildlife** (CDFW), submitted a letter dated November 9, 2023, providing information on CDFW role, assessment of biological resources, and analysis and mitigation measure recommendations for the project.

1.7 PROJECT SUMMARY

The potential effects of the Proposed Project are evaluated for the following resources in this Draft EIR:

- Air Quality
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Tribal Cultural Resources

Refer to Table ES-2 for a summary, by resource area, of the potential effects for each component of the Proposed Project.

1.8 DRAFT EIR ORGANIZATION AND CONTENTS

The environmental setting, including the project's location, existing site conditions, and surrounding land uses is described in Chapter 2 of this EIR. The Proposed Project and the schedule for its implementation are described in detail in Chapter 3 of this EIR. The existing setting,

environmental impacts of the Proposed Project, project alternatives, and mitigation measures for potentially significant effects are described in Chapters 4 and 5 for each resource considered. Other long-term CEQA considerations, including growth-inducing impacts, cumulative impacts, and significant irreversible environmental changes, are discussed in Chapter 6. Project alternatives, including alternatives eliminated from consideration and the No Project Alternative, are considered in Chapter 7. The remaining sections include references and a list of preparers.

Figure 1-1 Regional Project Location

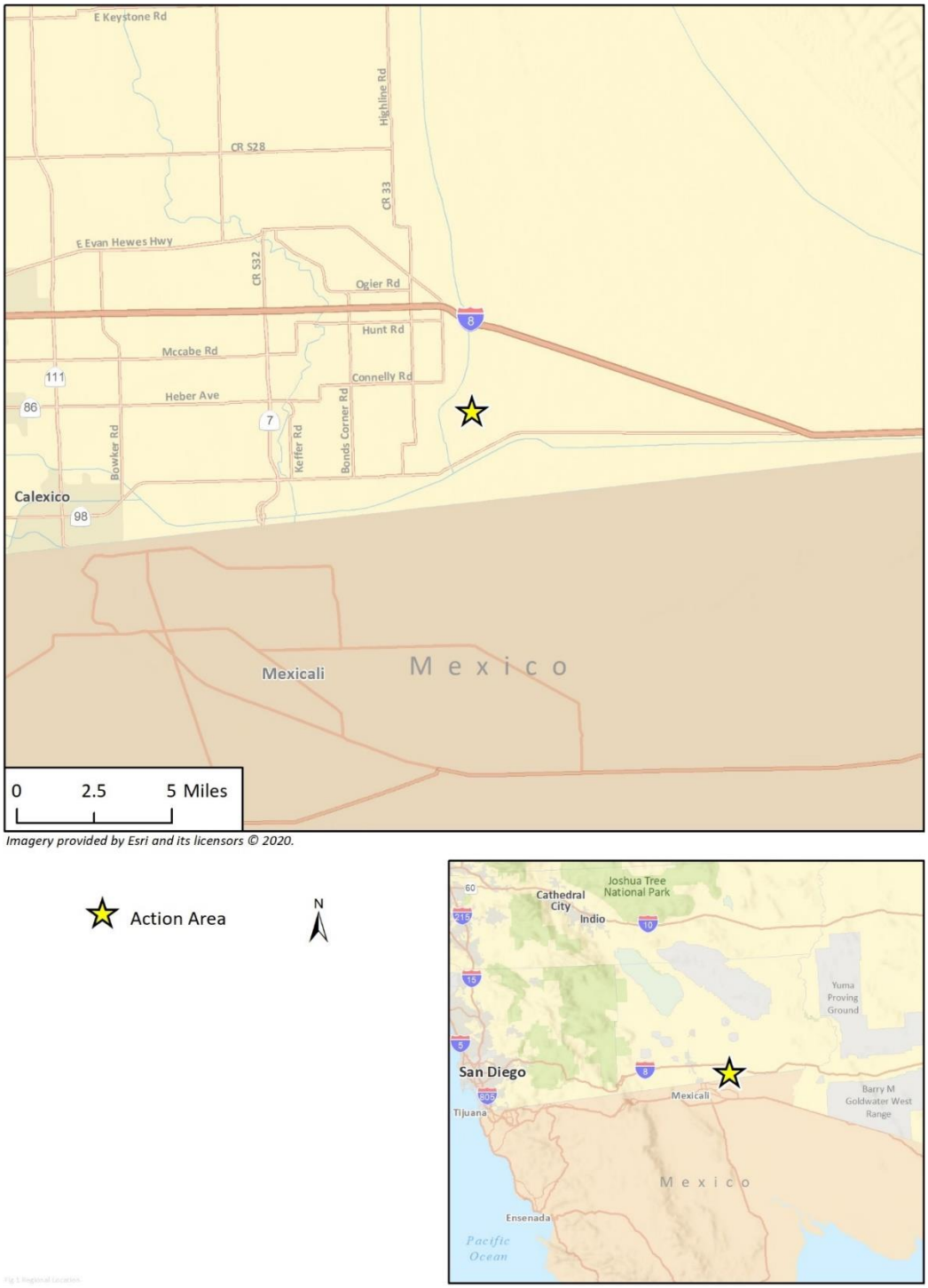

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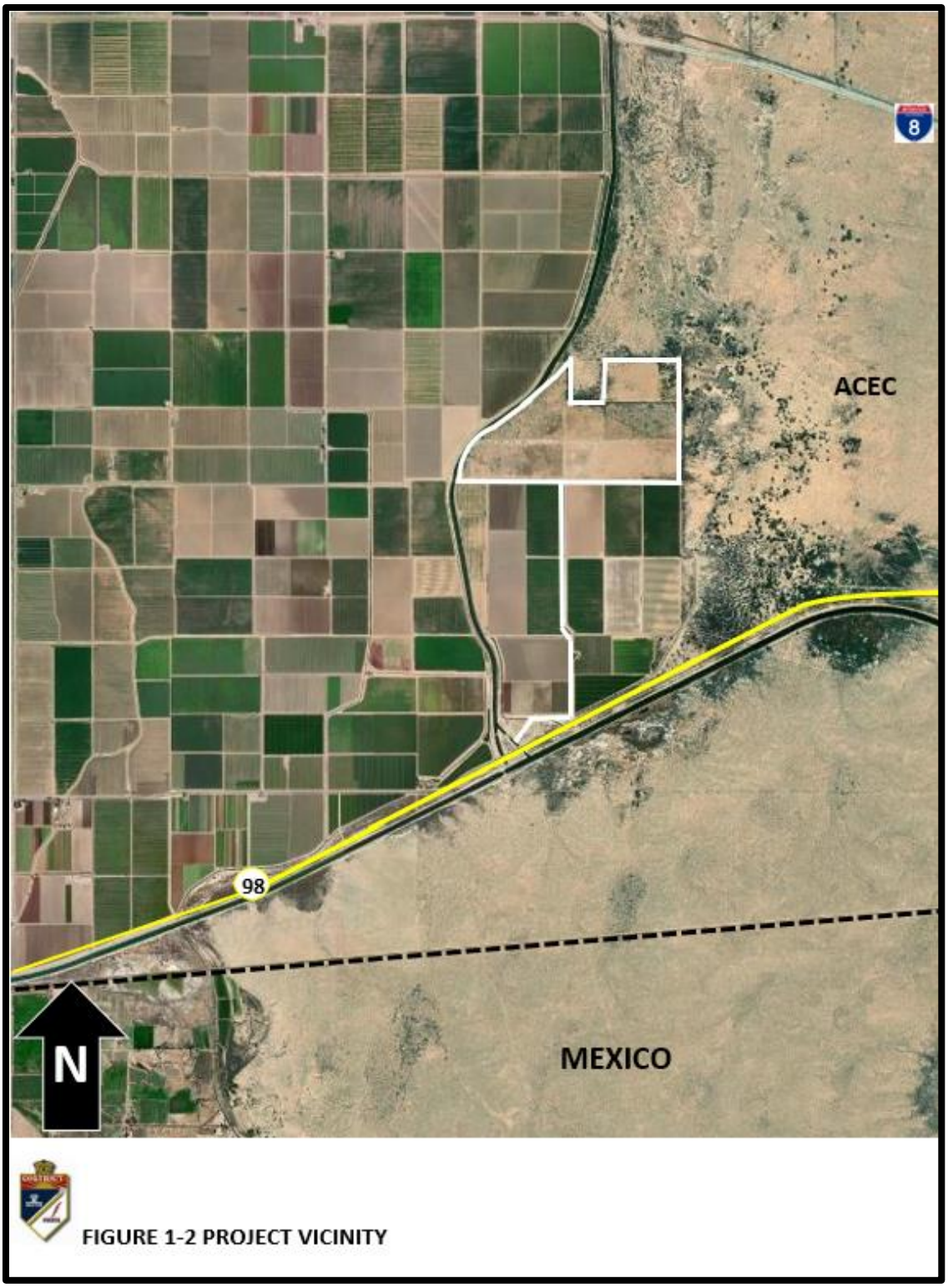
Figure 1-2 Project Vicinity



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CHAPTER 2
ENVIRONMENTAL SETTING

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CHAPTER 2
ENVIRONMENTAL SETTING

In accordance with Section 15125 of the CEQA Guidelines (14 CCR 15000 et seq.), this chapter provides a description of the general environmental setting for the Proposed Project area, including existing site conditions and land uses and surrounding land uses at the time the notice of preparation was published. More detailed descriptions of the environmental setting for each environmental issue area are provided in the corresponding sections in Chapter 4, Environmental Analysis, of this Draft EIR.

2.1 LOCATION

The proposed reservoir site consists of a combined total of approximately 591 acres of primarily agricultural land located within Imperial County, approximately 8 miles southeast of Holtville, California, and approximately 11 miles east of Calexico, California (Figure 1-1, Project Location and Figure 1-2, Project Vicinity Map). The proposed reservoir site is located on four parcels (Assessor's Parcel Numbers 055-250-020, 059-250-007, 055-310-006, and 059-250-008). The AAC is located approximately two miles south of the proposed reservoir basin site. The proposed reservoir site is located north of SR-98 and 2 miles south of Interstate 8. To the northeast and east of the proposed reservoir site is open and vacant desert land with desert shrubbery and patches of groundcover owned by BLM. Agricultural fields are to the northwest, west, and south of the proposed reservoir site, with the East Highline Canal directly adjacent to the west and two single-family dwellings and farming structures to the south and southwest. The proposed intake channel would run north–south, connecting the proposed reservoir to an AAC Reach that branches off of the AAC. The Proposed Project site is primarily flat land zoned as A-2 (General Agriculture) and A-3 (Heavy Agriculture), with a small portion that crosses a parcel of federal lands withdrawn to the Reclamation.

The major arterial roads within the project vicinity are Holdridge Road, which runs north and south, and SR-98, which runs east and west. Access to the project site is provided via Verde School Road, a dirt road running east–west, and Holdridge Road, a dirt road running north–south. Bornt Road runs adjacent to the East Highline Canal (to the east) but is not a through road. The nearest active airport is the Calexico International Airport, located 13.5 miles west of the Proposed Project site. There are two nearby residences: one is located approximately 150 feet south of the reservoir basin, across Verde School Road; a second is located approximately 150 feet east of the intake channel, across Holdridge Road. The nearest school is Emmett S. Finley Elementary School, located approximately 7.5 miles northwest of the Proposed Project site.

2.2 EXISTING SITE CONDITIONS

The Proposed Project site is southeast of the Salton Sea. The Proposed Project site is located within the Sonoran Desert, which is bounded on the west by the Peninsular Ranges and on the east by the Colorado River. The Proposed Project site is relatively flat and ranges from approximately 30 feet above mean sea level (amsl) at its western extent to 50 feet amsl near SR-98. The dominant topography of the Proposed Project site consists of flat fallow agriculture fields.

There are no current commercial or industrial operations conducted at the site. Utilities for the adjacent residence consist of overhead power, telephone, and cable lines. The Imperial Valley has historically been used for farming and water infrastructure since irrigation was brought to the area in 1901. The project site has historically been used for agriculture and is currently dominated by levelled agricultural land and linear earthworks; however, there is a section of disturbed desert land that would be bisected by the proposed intake channel.

2.2.1 Vegetation and Land Covers

The dominant topography of the Proposed Project site consists of flat fallow agriculture fields and disturbed areas (roads) irrigation canals, drains and small amounts of scrub habitat. Vegetation communities consists of arrow weed thickets, bush seepweed scrub, cattail marshes, creosote bush scrub, mesquite bosque/mesquite thicket, and tamarisk thickets; there are two land covers (disturbed habitat and open water). Descriptions of additional on-site physical features, such as biological, cultural, and water resources, are provided in Section 4.2, Biological Resources; Section 4.3, Cultural Resources; and Chapter 5, Effects Found Not to Be Significant, of this Draft EIR.

2.2.2 Hydrological Setting

The Proposed Project site is located within the Imperial Valley Planning Area, which comprises 2,500 square miles within the Colorado River Basin (RWQCB 2017). Surface flows from the Imperial Valley drain north towards the Salton Sea. The Project is located within the Brawley Hydrologic Area. The Colorado River is the main feature found within the Colorado River Basin and is located approximately 40 miles east of the Proposed Project site. Water is diverted to the AAC at Imperial Dam along the Colorado River. The 82-mile AAC runs along the south side of the Imperial Valley, westerly. The East Highline Canal runs north and receives water from the AAC and distributes it to agricultural fields downstream. Colorado River Water, via the AAC is the only water source used for irrigation, industrial, and domestic purposes in the Imperial Valley (RWQCB 2017). The AAC also diverts water into the Coachella Canal located approximately 18 miles east of the Project site. Other major hydrologic features of the region include the New and Alamo Rivers, which convey irrigation drainage from agricultural and surface runoff and wastewater from Imperial Valley.

Colorado River

Except for a small volume from Lower Colorado Water Supply Project pumping, Colorado River surface water is Imperial Valley's sole water resource. The Colorado River's unregulated flow is subject to great annual variation, and reservoirs have been constructed on the Colorado River to regulate this variability. Drought conditions have impacted the Colorado River watershed for over two decades. As of September 4, 2023, total system storage in the Colorado River Basin was 25.6 million acre-feet (43% of 58.5 million acre-feet total system capacity). This is only an increase of 5.7 million acre-feet over the total storage at the same time last year, when total system storage was 19.8 million acre-feet (33% of capacity) (Reclamation 2023). Palo Verde Dam serves as the Colorado River diversion structure for irrigated agriculture in eastern Riverside County, California, and the Imperial Dam serves as the Colorado River diversion structure for the AAC in California, which supplies water to IID, CVWD, and the Gila Gravity Main Canal in Arizona and Mexico.

2.3 SURROUNDING LAND USES

The project site is primarily surrounded by agricultural farmland to the west and south. There are two residence located approximately 150 feet from the Project site, across Verde School Road near the basin and across Holdridge Road near the intake channel. To the north and east of the project site, the undeveloped land with natural vegetation is maintained by BLM. Directly adjacent to the west of the Project site is the East Highline Canal, which is a large earthen canal that redirects water from the AAC to the south and directs the water north to agricultural fields throughout the eastern Imperial Valley. Approximately two miles south of the proposed reservoir basin site is the AAC.

2.4 GENERAL PLAN DESIGNATION AND ZONING

The County's General Plan, adopted in 1993 and revised and adopted in 2015 by the Imperial County Board of Supervisors, is a comprehensive, long-term planning document that prescribes overall goals and policies for development in the County. The land use designation for the Proposed Project location is Agriculture (County of Imperial 2007). The County's Zoning Map has designated the Proposed Project location as A-2 (General Agricultural Zone) and A-3 (Heavy Agricultural). Both the A-2 and the A-3 zones permit agricultural accessory structures outright. The Proposed Project would be considered an accessory structure to IID's current irrigation and distribution system which contains similar accessory reservoir structures throughout the Imperial Valley which are designed for operational flexibility and increase IID's water delivery efficiency, of which approximately 97 percent of its water goes to agricultural operations.

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CHAPTER 3
PROJECT DESCRIPTION

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CHAPTER 3
PROJECT DESCRIPTION

3.1 INTRODUCTION

This chapter describes the objectives and alternatives of the EHL Reservoir and Intake Channel Project and provides a detailed description of Project characteristics as required by CEQA. This chapter also describes the discretionary actions required for the Proposed Project. Considering the Proposed Project is located partially under federal jurisdiction, the Proposed Project alternatives were developed in accordance with both NEPA and CEQA requirements for analysis of a reasonable range of alternatives (see Section 3.4, Alternatives). IID is lead agency under CEQA, and Reclamation is the federal lead agency under NEPA. The lead agencies have directed and supervised the preparation of this Draft EIR, and the Environmental Assessment (EA) (Appendix A of this Draft EIR), and have independently evaluated its information and findings. Although IID is the agency preparing the environmental documentation and is responsible for construction, operation, and maintenance of the Proposed Action, Reclamation is considered the lead agency under NEPA because Reclamation is the federal agency with the authority to make permitting and project approvals.

This Draft EIR assesses the Proposed Project and alternatives to the Proposed Project as described below:

- No Project Alternative
- Larger Size Reservoir Alternative
- Alternative Intake Routes Alternative

The Proposed Project is discussed in detail in Section 3.2, Project Purpose and Objectives and in Section 3.3, Proposed Project. Section 3.4 discusses the selection of project Alternatives; Chapter 7, Alternatives, includes a discussion of the methodology used to screen alternatives and the rationale used to reject alternatives from further consideration and to identify the alternatives to be assessed in the EIR.

3.2 PROJECT PURPOSE AND OBJECTIVES

The underlying purpose for the Proposed Project is to facilitate in achieving state and regional water management and conservation goals. With these goals in mind, IID intends to maximize current levels of operational flexibility while creating an additional tool to assist meeting main-system and on-farm conservation program goals, thus augmenting the available water supply. The Project is also consistent with the State of California's water conservation objectives established under Executive Order B-37-16 to use water more wisely, eliminate water waste, strengthen local drought resilience and improve agricultural water use efficiency. The Proposed Project will assist the region in achieving the following

objectives listed in the 2012 Imperial Integrated Regional Water Management Plan (IRWMP): (1) meet 100% of future water demands without adverse impact to existing users that are not mitigated; (2) implement projects or programs that will provide a firm, verifiable, and sustainable supply of 50 to 100 thousand acre-feet per year for municipal, commercial, or industrial demands by 2025; and, (3) ensure equitable and appropriate cost sharing among water users who would receive benefits from any proposed water management project (Imperial Water Forum 2012). The Imperial IRWMP is part of the California Department of Water Resource's Integrated Regional Water Management Program, which was created to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict, and manage water to concurrently achieve social, environmental, and economic objectives.

IID also has in place a comprehensive 2021 Water Conservation Plan, updated every five years, and actively implements Water Conservation Programs, consistent with the Water Conservation Plan. Reservoirs are situated throughout IID's water distribution system as part of the ongoing Program objectives. IID currently uses 11 independent regulating reservoirs to level out the variability in water supply and demand. The supply of water must be ordered from Parker Dam one week in advance; the quantity is based on the estimated demand. Actual demand is affected by weather conditions. In addition, three lateral interceptor systems are in place, with several more planned. These systems capture lateral operational discharge for reuse within the irrigation system. Each of the three lateral interceptor systems discharges to one of the 11 reservoirs. The captured discharge is used for water regulation, flexibility and delivery purposes. Like the regulating reservoirs, lateral interceptor systems conserve water and provide improved service to farmers. The Proposed Project would maximize operational flexibility and augment this existing system for a highly efficient water delivery system, while assisting the region and state in reaching the respectively adopted water conservation goals. In addition, the Proposed Project provides public benefit because it allows for improved management of Colorado River water within IID's distribution system to maximize water conservation and on-farm efficiency.

This section presents the objectives of the Proposed Project, in accordance with CEQA. Under CEQA, an EIR must include a "statement of objectives sought by the Proposed Project" (14 CCR 15124(b)). These objectives are used to establish the range of alternatives to be considered in the Draft EIR for the purposes of CEQA (14 CCR 15126(d)). For IID, the underlying objective of the Proposed Project is to maximize current levels of operational flexibility while creating an additional tool to assist meeting main-system and on-farm conservation program goals and conserving up to 15,000 acre-feet of water annually. The specific objectives for IID are further described below:

- The Project will increase delivery flexibility and provide conservation opportunities within the district to accommodate in-valley water demand. These efforts are consistent with the

objectives set forth in IID's 2021 Water Conservation Plan. Mid lateral and off-line reservoirs are an integral part of the IID System Conservation Program.

- The Project will help support IID's 12-Hour Delivery Program via maximized operational storage capacity and flexibility, enabling farmers to match crop water requirements and conserve water. The reservoir will help balance supply-demand mismatches due in part to conveyance travel time, peak demands, unavailable storage, and rain events.

- The Project will provide consistency with the 2018 California Water Plan goals: Goal 2-Strengthen Resiliency and Operational Flexibility of Existing and Future Infrastructure; Goal 4-Empower California's Under-Represented and Vulnerable Communities; and, Goal 6-Support Real-time Decision-making, Adaptive Management, and Long-term Planning.

- The Project will be in support of the Reclamation Reform Act of 1982 to " . . . encourage . . . consideration and incorporation of prudent and responsible water conservation measures . . .by . . . recipients of irrigation, municipal and industrial water . . ."

The specific project design objectives are described below.

- Optimal reservoir placement that will benefit the greatest number of downstream IID water users and on-farm water conservation efforts.
- Utilize a route with the most beneficial hydrologic conditions to accommodate gravity flow (i.e., avoiding/minimizing pumping).
- Minimize the length of the intake channel from AAC Reach and the outflow channel to the East Highline Canal.
- Minimize displacement of existing IID and farming infrastructure.

3.3 PROPOSED PROJECT

3.3.1 Location

The Proposed Project would be located in the southern region of Imperial County, east of Calexico and southeast of Holtville (Figure 1-1, Project Location). More specifically, the Proposed Project is within the Bonds Corner Geological Survey 7.5-minute quadrangles, with latitude and longitude coordinates of 32°43′35″N and 115°16′52″W. The Proposed Project is located directly east of the East Highline Canal and directly west of BLM land. The proposed reservoir site is located north of the AAC, approximately 2 miles north of SR-98, and approximately 2 miles south of Interstate 8. To the east of the Proposed Project site is open and vacant desert land with desert shrubbery and patches of groundcover owned by BLM. Agricultural fields are to the northwest, west, and south of the Proposed Project site, with the East Highline Canal directly adjacent to the west of the Proposed Project site.

Land Use and Zoning

According to the Imperial County General Plan Land Use Element, the land use designations of the Proposed Project is Agriculture and Recreation/Open Space (County of Imperial 2015). Under the County of Imperial Land Use Ordinance, the Proposed Project site is primarily flat land zoned as A-2 (General Agriculture) and A-3 (Heavy Agriculture), with a small portion that crosses a parcel of federal lands withdrawn to Reclamation. The current land use is agricultural. The Proposed Project would be consistent with agricultural land uses. The A-2 zone permitted uses include agricultural accessory structure(s), buildings, and uses. The A-3 zone permitted uses include agricultural accessory structures, miscellaneous uses including water storage or groundwater recharge facilities, and water systems (County of Imperial 1998). The proposed reservoir would be an agricultural accessory structure to IID's current irrigation and distribution system which spans over 1,667 miles of canals, contains similar accessory reservoir structures throughout which are designed to enable increased operational flexibility. IID delivers approximately 97 percent of its water to agricultural operations.

3.3.2 Project Summary

The Proposed Project consists of an agricultural single cell water reservoir covering approximately 440 acres, within a 591-acre Project footprint, for the operational management of up to approximately 365,000 acre-feet of water annually. The reservoir would have concrete-lined inside embankments and a geo-membrane liner on the base floor and extending up under the embankment concrete and an overall capacity of 2,100 acre-feet. The maximum water depth of the reservoir would be approximately 6 feet and a maximum below grade depth of 5 feet.

Water would be gravitationally conveyed from the AAC Reach to the proposed reservoir basin via an open intake channel within a new proposed right-of-way (approximately two miles in length) for the temporary storage of water. Water temporarily stored in the proposed reservoir would be delivered to serve downstream agricultural demands through an automated gate outlet with a maximum gravity flow capacity of approximately 1,000 cfs for delivery into the East Highline Canal which serves the eastern Imperial Valley. Approximately 63 acres of the proposed intake channel would be constructed on agricultural land and approximately 3 acres of the proposed channel would cross Reclamation federally managed lands, at the southern end of the proposed intake channel route off the AAC Reach.

The proposed intake channel will run from the east side of the AAC Reach within a narrow right-of-way (ROW) ranging from 100 feet to 250 feet in width within federal owned land and expanding up to 300-feet in width along the agricultural lands. The ROW would include culverts near the AAC Reach extending easterly up to 500 feet in length and the open channel, embankments on either side, and 24-foot-wide operation and maintenance roads on either side (top of embankment)

as may be accommodated within the proposed ROW. The actual channel would have a bottom of approximately 28 feet with a total open channel width of approximately 70 feet (concrete edge to concrete edge) and a depth of 10 to 15 feet from the top of the embankments. The intake channel would convey water flows at a flow rate of up to 1,500 cubic feet per second (cfs). Impacts to the AAC Reach include the cutting of the AAC Reach bank to allow a direct connection to culvert structures which lead to an open intake channel. The intake structure would alter approximately 150 feet of the AAC Reach bank. The embankments of the proposed intake channel embankment would have a maximum height of approximately 10 feet above existing grade.

Two potential staging areas are anticipated in the northern portions of the Proposed Project site, as indicated on Figure 1-2, within an estimated 35 acres owned by IID. A third potential staging area on private agricultural land has also been assessed but is unlikely to be necessary. The construction and use of the Proposed Project is primarily for agricultural purposes to have an upstream operational reservoir that will allow for the management of fluctuating downstream agricultural demands due to increases in requests for shorter 12-hour water deliveries or any reductions from the normal 24-hour water delivery period. The Proposed Project would also allow for water conservation by creating a more efficient canal system with this additional water management facility upstream of most of IID's water service area. The Proposed Project objectives are consistent with the Reclamation Reform Act of 1982, California's 2018 California Water Plan Goals and IID's 2021 Water Conservation Plan.

Required Permits and/or Approval

Implementation of the Proposed Project would require discretionary approvals by state and local agencies, as shown in Table 3-1, Project Approvals. Discretionary approvals would include certification of the Final EIR under CEQA, and approval of an Implementation Agreement by Reclamation.

Table 3-1
Project Approvals

Authorizing Jurisdiction or Agency	Action
Bureau of Reclamation	Issuance of an Implementation Agreement
State Water Resources Control Board	Approval of NPDES Construction General Permit
California Regional Water Quality Control Board	Clean Water Act Section 402 Permit NPDES Certification
County of Imperial Public Works Department	Road Abandonment of Holdridge Road Holdridge Road Realignment Design Approval
Imperial County Air Pollution Control District	Approval of Authority to construct and/or permits to operate; Approval of an Enhanced Dust Control Plan

Note: SWPPP = Storm Water Pollution Prevention Plan; NPDES = National Pollutant Discharge Elimination System.

3.3.3 Project Components

The Proposed Project would involve two principal components 1) intake and conveyance channel structure, and 2) reservoir basin with outlet gates:

Intake Structure and Conveyance Channel: The proposed intake channel would be located along agricultural land, south of the proposed reservoir site, with the exception of approximately three acres that would cross federally owned lands, withdrawn to Reclamation, at the southern end of the proposed intake channel route off of the AAC Reach. The proposed intake channel would consist of underground culverts spanning over a distance of 500 feet and leading into an open channel up to approximately 70 feet wide and having a maximum depth of 10 to 15 feet from the top of the embankments. The embankments of both the proposed reservoir and the proposed intake channel would have a maximum height of approximately 10 feet above finish grade. The intake channel would be concrete lined for reinforcement.

Regarding construction, temporary impacts may occur within a 300-foot buffer from the length of intake channel to allow for activities like vehicles passing, laydown, and staging, except that the width will be restricted within federally owned land to accommodate a minimum buffer from existing cultural resources. As such, the total area for construction disturbance for the intake channel would be up to 66 acres, with approximately 63 of these acres occurring on disturbed farmland and three acres on federal land. The intake structure and channel would entail excavating and concrete lining the intake channel following the alignment shown in Figure 1-2, Project Vicinity. This would include traversing Bornt Road and over the All-American Drain 2A (AA Drain 2A). Traversing Bornt Road would be achieved via a row of box culverts across the entire width of the roadway that may or may not require an access ramp and continue for a total of 500 feet, approximately. The open intake channel would also traverse AA Drain 2A which will be altered via box culverts as well. An Encroachment Permit will be secured through Imperial County Public Works Department (ICPWD) as well as approval of temporary detour plans to accommodate construction of the conveyance channel across Bornt Road and Holdridge Road further north.

The proposed reservoir would have a flat floor, gradually sloped, to allow for gravity flow into the East Highline Canal and utilize the natural terrain to promote a balanced and efficient use of on-site native materials. The proposed reservoir and proposed intake channel would be excavated to a maximum of 5 feet below grade.

Reservoir and Outlet Gate: The Proposed Project includes a single cell reservoir facility, covering approximately 440 acres, which would manage up to 365,000 acre-feet of water annually, having a maximum storage capacity of 2,100 acre-feet. The reservoir would be concrete lined inside embankments and contain a geo-membrane liner on the base floor. The maximum water depth of

the reservoir would be no greater than 6 feet and have a maximum below grade depth of 5 feet. The water managed in the proposed reservoir would then gravity flow into the East Highline Canal, one of the three main canals that are owned and operated by IID and that branch off of the AAC. The AAC facility is owned by Reclamation, and is operated by IID under contract with Reclamation.

Temporarily stored water would be delivered to the East Highline Canal through automated outlet gates and structure upon downstream demand. The outlet gates and structure would have a gravity flow capacity of approximately 1,000 cfs for delivery into the East Highline Canal. The automated outlet gates would use electricity via connection to existing electrical lines servicing the project site. See Table 3-2 for the list of equipment that would be used during construction of the reservoir. In addition, a driveway with controlled access and perimeter roadway around the reservoir would be constructed to allow for inspections and maintenance. Approximately 27,000 cubic yards of concrete would be used for construction of the reservoir, intake, outlet and associated supporting structures. Approximately 100 workers in total would be anticipated to undertake the described construction activities for the reservoir and outlet gate phase, which are expected to be drawn from the local labor force.

Construction activities would take place over a series of phases that may overlap or run concurrently as noted in Table 3-2.

Table 3-2
Phasing and Equipment

Phase Number	Phase Name	Months of Construction	List of Equipment*
Phase 1	Reservoir	15	Pickups, Dozer, Large Excavator Backhoe, Dump Truck (40 ton wagons), Flat Bed Truck, Vibratory Compactor, Ready-mix Concrete Trucks, Shotcrete Pump, Concrete Curing Applicator, Water Truck, Caterpillar motor grader, Small Crane or Large Boom Truck, 25 kVA Portable Generator, Dewatering Pump System
Phase 2	Bornt Road and Holdridge Road Detours	2	Pickups, Dozer, Large Excavator Backhoe, Dump Truck (40-ton wagons), Flat Bed Truck, Water Truck, Caterpillar motor grader
Phase 3	Sedimentation Basin/Channel	3	Pickups, Dozer, Large Excavator Backhoe, Dump Truck (40 cy wagons), Gradall (Trimming), Ready-mix Concrete Trucks, Shotcrete Pump, Concrete Curing Applicator, Flat Bed Truck, Vibratory Compactor, Water Truck, Caterpillar motor grader, 25 kVA Portable Generator, Dewatering Pump System
Phase 4	Intake Channel and Measurement Flume	3	Pickups, Gradall (Trimming), Ready-mix Concrete Trucks, Shotcrete Pump, Concrete Curing Applicator, Flat Bed Truck, Vibratory Compactor, Caterpillar 633 Self-loading scraper, Small Boom Truck, Water Truck, Caterpillar motor grader, 25 kVA Portable Generator, Dewatering Pump System

Phase 5	Canal Tie-Ins	3	Pickups, Large Excavator Backhoe, Dump Truck, Pile Driving, Vibratory Compactor, Gradall (Trimming), Ready-mix Concrete Trucks, Shotcrete Pump, Concrete Curing Applicator, Small Crane or Large Boom Truck, Water Truck, 15 kVA Portable Generator, Dewatering Pump System
Phase 6	Structures	3	Pickups, Dozer, Large Excavator Backhoe, Dump Truck (40 cy wagons), Gradall (Trimming), Ready-mix Concrete Trucks, Shotcrete Pump, Concrete Curing Applicator, Flat Bed Truck, Vibratory Compactor, Water Truck, Caterpillar motor grader, 25 kVA Portable Generator, Dewatering Pump System

*Not all equipment listed is used in all months of the identified construction phase.

3.3.4 Construction

Construction of the reservoir Project would take a total of approximately 15 months and would involve six principal phases that may overlap or be implemented concurrently. The previously introduced phases are described in more detail in the following paragraphs. Phase activities may overlap or run concurrently.

Reservoir Basin (Phase 1): The construction of the reservoir basin is anticipated to occur over and up to a 15-month construction period. Construction of the reservoir will require a crew consisting of a maximum of 100 construction workers on site for any one day, over the duration of the construction period. The total area that will be excavated and graded to accommodate a 440 acre basin is approximately 525 acres. The total volume of excavation is estimated to be approximately 2 million cubic yards. The temporary disposal/storage facility is on-site within the two staging areas within the proposed reservoir site. However, a material balance is expected at Project end. The quantity of concrete lining for the reservoir would be approximately 16,500 cubic yards. A geo-membrane liner would be installed at the base of the reservoir and extend up under the concrete lining in the embankment. Table 3-2 presents the construction equipment that will likely be required at various times during the construction of the reservoir (Phase 1).

Bornt Road and Holdridge Road (Phase 2): The Bornt Road detour would be initiated during the first month of construction and both Holdridge Road detour and re-alignment would also initiate during the first month of construction. The detour plans would be coordinated through, and approved by, ICPWD as well as Reclamation for the small portion affecting federal withdrawn lands. The Bornt Road detour would be temporary, while construction of the intake route intersects with Bornt Road. Traversing of Bornt Road would be accommodated via underground box culverts. Holdridge Road would result in a permanent realignment after the section north of Verde School Road is abandoned. Table 3-2 presents the construction equipment that would likely be required during the construction of the roadways under Phase 2.

Sedimentation/Channel Basin (Phase 3): The construction of the sedimentation basin would be anticipated to occur over a three-month construction period and is a concurrent activity with the intake channel. Construction of the sedimentation basin would require a crew consisting of a peak of 40 workers at one time over the duration of the construction period but average 15 workers. The total area that will be graded is approximately 10 acres. The temporary disposal/storage facility is proposed to be located within the staging areas adjacent to the reservoir. The quantity of concrete lining for the sedimentation basin would be the same as described in the intake channel. Table 3-2 presents the construction equipment that would likely be required during the construction of the sedimentation basin. This Phase 3 would overlap with Phase 4, Intake Channel and Measurement Flume.

Intake Channel and Measurement Flume (Phase 4): The construction of the intake channel and measurement flume would be anticipated to occur over about a three-month construction period. Construction of the intake channel and measurement flume would require a crew consisting of a peak of 40 workers at one time, over the duration of the three-month construction period. The total area that will be graded is approximately 66 acres. The total volume of channel embankment is estimated to be about 500,000 cubic yards of material. The embankment material will be hauled primarily from the reservoir basin excavation. The quantity of concrete lining would be approximately 10,500 cubic yards. Table 3-2 presents the construction equipment that would likely be required during the construction of the intake channel and measurement flume under Phase 4.

Canal Tie-Ins (Phase 5): The construction of the AAC Reach Tie-In and East Highline Canal Tie-In would occur over an approximately three-month period and would require a crew consisting of a maximum of 10 workers over the duration of the construction period, after the Bornt Road detour, and would overlap partially with the sedimentation basin (Phase 3) and the intake channel and measurement flume (Phase 4). Table 3-2 presents the construction equipment that would likely be required at various times during the construction of the tie-ins under Phase 5.

Structures (Phase 6): The construction of the Bornt Road crossing via culverts, canal inlet structure, reservoir outlet structure, meter vault, diesel generator stations and East Highline Canal outfall structure would occur over an approximately six-month period and would require a crew consisting of a maximum of 12 workers over the duration of the construction period. Table 3-2 presents the construction equipment that would likely be used during the construction of the structures.

3.3.5 Operation

The Project is not a manned facility. The Proposed Project would be accessible for periodic maintenance from existing County dirt roads, Bornt Road, Holdridge Road and Verde School Road (existing and proposed realigned segment). These County roads are accessible via Bonds Corner

Road and SR-98. Maintenance would be undertaken by IID in accordance with existing practices for reservoir inspections and repair. No on-site operations and maintenance facilities would be provided. Inspections would be made via crew trucks and using the existing roads infrastructure and the constructed access and maintenance roads for the intake channel and reservoir. The facilities are gravity flow and the outlet gate would be controlled by a remote operated automated mechanism.

3.4 ALTERNATIVES

3.4.1 Selection of Project Alternatives

Project alternatives were selected in accordance with both the CEQA Guidelines and NEPA requirements. A reasonable range of alternatives have been identified. The following provides a summary of the alternatives considered but rejected based on screening criteria used to evaluate alternatives and rationale for excluding those alternatives not taken forward for further study in this EIR.

Alternatives Considered But Rejected

Multiple Smaller Reservoirs

The Multiple Smaller Reservoirs Alternative would construct up to seven reservoirs on privately owned agricultural parcels. These reservoirs would be smaller in size, and each would be operated by the landowner of the land on which the reservoir is located. The Multiple Smaller Reservoirs Alternative was developed to provide an alternative to the Proposed Project that would benefit the local farmers and provide nearby farms with a plentiful, independent water supply. This alternative would not accomplish all the Project objectives and only provide a few local land owners with increased water delivery flexibility, thus leaving the remaining downstream water users with no additional benefit from an improved system efficiency. Overall, this alternative would not avoid any significant environmental effects, or accomplish the Proposed Project objectives and was eliminated from further consideration.

Alternative Site Locations

IID considered 11 sites prior to determining the most appropriate site for the Proposed Project. However, 10 of these sites were eliminated as prospective sites due to one or more of the following reasons: the hydraulic conditions of the site are not adequate to be redeveloped as a reservoir and supporting infrastructure, the site is located on BLM Areas of Critical Environmental Concern (ACEC) land, or the site was considered financially infeasible. The 10 eliminated alternative site locations are listed below.

1. North of Anza Road, east of Bowker Road, and southwest of the AAC
2. North of the AAC, east of Claverie Road, south of Carr Road, and west of SR-7
3. North of the AAC, east of Hawk Road and south of SR-98
4. North of the Mexico Border, south of the AAC, approximately 1 mile southeast of Bonesteele Road
5. Southeast of Holdridge Road, approximately 0.25 miles north of SR-98
6. Northwest of Holdridge Road, approximately 0.15 miles southeast of the EHL Canal
7. Southwest of Holdridge Road, approximately 0.7 miles southeast of the EHL Canal
8. South of Desert Road, approximately 0.7 miles northeast of Verde School Road
9. North of SR-98, approximately 1.15 east of Holdridge Road
10. South of SR-98, approximately 4 miles northwest of the SR-98 and I-8 intersection

Alternatives Considered for Evaluation

The following are three alternatives to the Proposed Project that were considered and have been taken forward for evaluation under this EIR:

- No Project Alternative
- Larger Capacity Reservoir Alternative
- Alternative Intake Route Alternative

Chapter 7 of this EIR compares each of the project alternatives, including the No Project Alternative, against the Proposed Project, and identifies the environmentally superior alternative.

3.4.2 Description of Alternatives

The following describes the alternatives to the Proposed Project that have been taken forward for evaluation in this EIR.

No Project Alternative

The No Project Alternative is the scenario under which the Proposed Project is not permitted, constructed, or implemented. The No Action Alternative provides a basis for comparison of the environmental consequences of the proposed action. It is defined as "existing environmental conditions" as well as what would reasonably be expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure (14 CCR 15126.6(e)(2)).

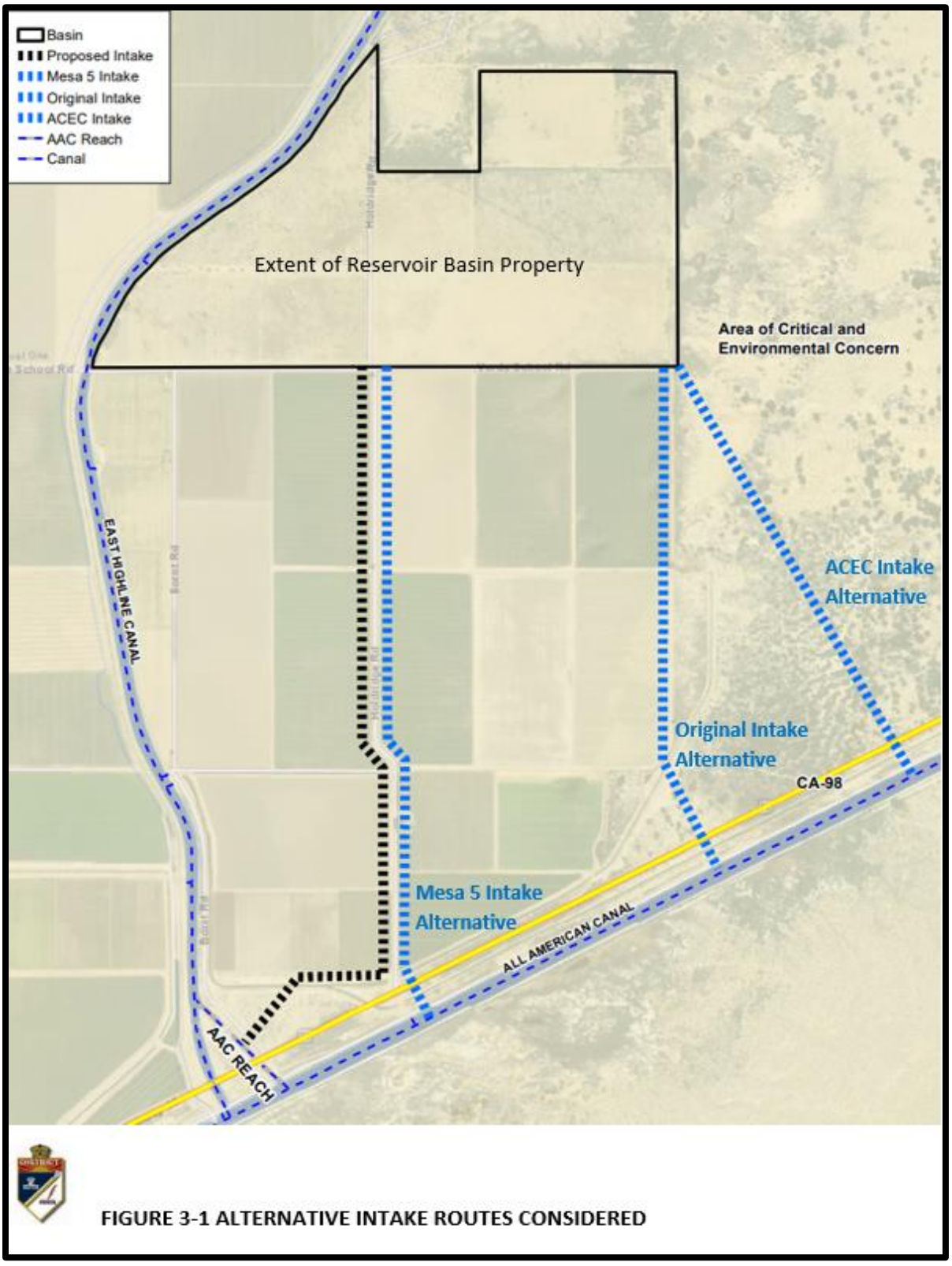
Larger Capacity Reservoir Alternative

The Larger Capacity Reservoir Alternative would manage up to approximately 3,400 acre-feet of water, over approximately 340 acres of agricultural land accommodated by deeper embankments. Compared to the proposed 440-acre reservoir, the Larger Capacity Reservoir would be approximately 100 acres smaller but up to five feet deeper, with 1,300 acre-feet more water capacity. The Larger Capacity Reservoir would lessen the acreage of agricultural land affected and biological resources affected. Deeper excavation, however, may increase the potential for cultural, paleontological, and tribal resources to be encountered. The larger reservoir capacities and depth would result in a Hazard Classification from the Department of Water Resources Department of Safety of Dams associated with a potential risk of flooding.

Alternative Intake Routes Alternative

This alternative would entail the proposed reservoir in the same placement; however, the intake channel route would not be to the AAC Reach but rather be directly to the AAC (see Figure 3-1 – Alternative Intake Routes) . The intake channel routes would be situated further east of where the Proposed Project intake route is. The alternative intake locations were limited to those that would be able to connect the AAC/main canal and intake channel at a 90-degree angle for hydrological reasons. One alternative intake channel route considered would have connected to the proposed reservoir in the same location as the preferred alternative at a straight, southerly connection along Holdridge Road and to the AAC (Mesa 5 Intake Alternative). A second alternative intake channel route considered would have connected at a point furthest east of the basin providing greater gravity flow capabilities and having the least amount of impact to farmland prior to connecting to the AAC (Original Intake Alternative). A third alternative intake channel route considered would have also connected at a point furthest east of the basin, offering the most optimal gravity flow capabilities but traversing the BLM managed ACEC (ACEC Intake Alternative). All three alternative intake channel routes would require pipelining the channel section under the existing State Route 98 necessitating a temporary roadway detour. The traffic detour would result in potential adverse impacts to cultural properties and/or resources. Direct and indirect biological impacts would likely be greater under the considered intake channel alternatives considering that the traffic detour route would directly impact undisturbed lands.

Figure 3-1 Alternative Intake Routes



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CHAPTER 4
ENVIRONMENTAL IMPACT CONSIDERATIONS

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APPENDICES

FIGURES

TABLES

CHAPTER 4
ENVIRONMENTAL IMPACT CONSIDERATIONS

4.1 AIR QUALITY

This section describes the impacts of the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project) on air quality and its contribution to regional air quality conditions. This section identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Proposed Project.

4.1.1 Existing Conditions

The Project is located within the Imperial County (County) portion of the Salton Sea Air Basin (SSAB). The SSAB includes all of County and the central portion of Riverside County (Coachella Valley). The SSAB is a 4,284-square-mile area in the southwestern corner of California and is bounded by Riverside County to the north, Mexico to the south, Arizona to the east, and the Coyote and Fish Creek Mountains, which are part of San Diego County, to the west.

Climate

The Proposed Project is located in the Northern Sonoran Desert, which has a subtropical desert climate with hot, dry summers and mostly mild winters. Climatic conditions in the County are governed by the large-scale sinking and warming of air in the semi-permanent tropical high-pressure center of the Pacific Ocean. The high-pressure ridge blocks out most mid-latitude storms except in winter, when it is weakest and farthest south. The coastal mountains prevent the intrusion of any cool, damp air found in California coastal environs. Because of the barrier and weakened storms, the County experiences clear skies, extremely hot summers, mild winters, and little rainfall. The sun shines, on average, more in the County than anywhere else in the U.S.

The County is one of the hottest and driest parts of California, and is located in a region best described as a low latitude desert, characterized by hot, dry summers and relatively mild winters. Average annual precipitation is less than two inches. Daily average temperatures in the winter ranges between 65°F and 75ºF. Summers are extremely hot with daily average temperatures ranging between 104ºF and 115ºF during the summer months.

Humidity is low throughout the year, ranging from an average of 28 percent in summer to 52 percent in winter. The large daily oscillation of temperature produces a corresponding large variation in the

relative humidity. Nocturnal humidity rises 50 percent to 60 percent but humidity drops to about 10 percent during the day.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air mix and disperse into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in coastal Southern California. The cool, damp, and hazy sea air capped by coastal clouds is heavier than the warm, clear air, which acts as a lid through which the cooler marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above mean sea level (amsl), the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet amsl, the terrain prevents the pollutants from entering the upper atmosphere, resulting in the pollutants settling in foothill communities. Below 1,200 feet amsl, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours.

Mixing heights for inversions are lower in the summer and inversions are more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the SSAB. High ozone levels in Southern California are generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods, allowing them to form secondary pollutants by reacting in the presence of sunlight.

Wind within the County generally follows two patterns: prevailing winds are from the west–northwest through southwest, and a secondary flow maximum from the southeast is also evident. The prevailing winds from the west and northwest occur seasonally from fall through spring and are known to be from the Los Angeles area. Occasionally, the County experiences periods of extremely high wind speeds. Wind speeds can exceed 31 miles per hour; this occurs most frequently during the months of April and May, while wind speeds of 6.8 miles per hour account for more than 50 percent of the observed wind measurements.

The County is susceptible to air inversions. This traps a layer of stagnant air near the ground where pollutants are further concentrated. These inversions produce haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources. Elevated concentrations of particulate matter with an aerodynamic diameter less than or equal to 10 microns (coarse particulate matter, or PM_{10}) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns (fine particulate matter, or $PM_{2.5}$) can occur in the SSAB throughout the year, but occur most frequently in fall and winter.

Although there are some changes in emissions by day of week and season, the observed variations in pollutant concentrations are primarily the result of seasonal differences in weather conditions.

4.1.2 Pollutants and Effects

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards or criteria for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include O_3, nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), PM_{10}, $PM_{2.5}$, and lead. These pollutants, as well as toxic air contaminants (TACs), are discussed in the following paragraphs.[1] In California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants.

Ozone. O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during late spring, summer, and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O_3 exists in the upper atmosphere ozone layer as well as at the Earth's surface in the troposphere.[2] The O_3 that the EPA and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good," O_3 occurs naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the

[1] The descriptions of each of the criteria air pollutants and associated health effects are based on the U.S. Environmental Protection Agency's (EPA's) "Criteria Air Pollutants" (2016) and CARB's "Glossary of Air Pollution Terms" (2016).

[2] The troposphere is the layer of the Earth's atmosphere nearest to the surface of the Earth. The troposphere extends outward about 5 miles at the poles and about 10 miles at the equator.

lung tissue, and some immunological changes (EPA 2013). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide, which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers. NO_2 can irritate the lungs and may potentially lower resistance to respiratory infections (EPA 2018).

Carbon Monoxide. CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, automobile exhaust accounts for the majority of CO emissions, however, the Proposed Project would not be located in an urban area. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions.

Sulfur Dioxide. SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that affects the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) consists of particulate matter that is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) consists of particulate matter that is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles, power generation, and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides, NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the blood stream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, chronic respiratory, or cardiovascular disease and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. Premature mortality has been linked to $PM_{2.5}$ exposure even in otherwise healthy populations. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in PM_{10} and $PM_{2.5}$ (EPA 2009).

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Visibility-Reducing Particles. Visibility-reducing particles are any particles in the air that obstruct the range of visibility. Effects of reduced visibility can include obscuring the viewshed of natural scenery, reducing airport safety, and discouraging tourism. Sources of visibility-reducing particles are the same as for $PM_{2.5}$ described above.

Volatile Organic Compounds. Hydrocarbons are organic gases that are formed from hydrogen and carbon and sometimes other elements. Hydrocarbons that contribute to formation of O_3 are referred to and regulated as VOCs (also referred to as reactive organic gases). Combustion engine exhaust, oil refineries, and fossil-fueled power plants are the sources of hydrocarbons. Other sources of hydrocarbons include evaporation from petroleum fuels, solvents, dry cleaning solutions, and paint.

The primary health effects of VOCs result from the formation of O_3 and its related health effects. High levels of VOCs in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons, such as benzene, are considered toxic air contaminants (TACs). There are no separate health standards for VOCs as a group.

Non-Criteria Air Pollutants

Toxic Air Contaminants. A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure or increasing the risk of acute and/or chronic non-cancer health effects. In California, specific air toxics are designated as TACs through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. Federal laws use the term hazardous air pollutants to refer to the same types of compounds that are referred to as TACs under state law.

Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

Diesel Particulate Matter. Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than 1 micrometer in diameter (about 1/70th the diameter of a human hair), and thus is a subset of $PM_{2.5}$ (CARB 2016). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2016). The CARB classified "particulate emissions from diesel-fueled engines" (i.e., DPM; 17 CCR 93000) as a TAC in August 1998.

DPM is emitted from a broad range of diesel engines: on-road diesel engines of trucks, buses, and cars and off-road diesel engines including locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). Because it is part of $PM_{2.5}$, DPM also contributes to the same non-cancer health effects as $PM_{2.5}$ exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2016). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

Odorous Compounds. Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. Known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

Sensitive Receptors. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. Facilities and structures where these air pollution-sensitive people live or spend considerable amounts of time are known as sensitive receptors. Land uses where air pollution-sensitive individuals are most likely to spend time include schools and schoolyards, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential communities (sensitive sites or sensitive land uses) (CARB 2005a). The closest sensitive receptor to the Proposed Project are two single-family residences: one is approximately 150 feet south of the Project site's proposed reservoir basin and a second is approximately 150 feet east of the proposed intake channel.

4.1.3 Relevant Plans, Policies, and Ordinances

Federal

U.S. Environmental Protection Agency

The principal air quality regulatory mechanism on the federal level is the Clean Air Act (CAA) and in particular, the 1990 amendments to the federal CAA and the National Ambient Air Quality Standards (NAAQS) that it establishes. The EPA also has regulatory and enforcement jurisdiction

over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the federal government, such as aircraft, locomotives, and interstate trucking. EPA's primary role at the state level is to oversee the state air quality programs. EPA sets federal vehicle and stationary source emission standards and oversees approval of all State Implementation Plans (SIPs), and also provides research and guidance in air pollution programs. The SIP is a state level document that identifies all air pollution control programs within California that are designed to meet the NAAQS.

State

California Air Resources Board

CARB is a department of the California Environmental Protection Agency, oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 amendments to the California CAA, responding to the CAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions. The amendments to the California CAA established the California Ambient Air Quality Standards (CAAQS) and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the federal CAA and also include sulfate, visibility reducing particulates, hydrogen sulfide, and vinyl chloride. They are also more stringent than the federal standards.

The CARB is also responsible for regulations pertaining to TACs. The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill 2588) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. Assembly Bill 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the SSAB. Each air pollution control district ranks the data into high, intermediate, and low priority categories. When considering the ranking, the potency, toxicity, quantity, volume, and proximity of the facility to receptors are given consideration by an air district.

California Environmental Quality Act

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.). In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable air district may be relied upon to determine whether the Proposed Project would have a significant impact on air quality.

Local

Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG is the federally designated metropolitan planning organization for the majority of the Southern California region and is the largest metropolitan planning organization in the nation. As the designated metropolitan planning organization, SCAG is mandated by the federal government to develop and implement regional plans that address transportation, growth management, hazardous waste management, and air quality issues. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide for the Imperial County region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation components of the Air Quality Attainment Plan (AQAP) and are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQAP.

Imperial County Air Pollution Control District

The Imperial County Air Pollution Control District (ICAPCD) has jurisdiction over air quality for the Project area. The ICAPCD has adopted an AQAP to establish a program of rules and regulations directed at attainment of the state and national air quality standards. Conformance with the AQAP for development projects is determined by demonstrating compliance with local land use plans. All development projects within the ICAPCD are required to comply with existing ICAPCD rules as they apply to each specific project.

The AQMP for the SSAB (CARB 2005b), through the implementation of the Imperial County Air Quality Attainment Plan for Ozone and the SIP for PM_{10} in the Imperial Valley, sets forth a comprehensive program that will lead the SSAB into compliance with all federal and state air quality standards. The AQAP control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with the AQAP for development projects is determined by demonstrating compliance with local land use plans and/or population projections, meeting the land use designation set forth in the local General Plan, and comparing assumed emissions in the AQAP to proposed emissions.

Local provisions applicable to the Project site include ICAPCD Regulation VIII (fugitive dust). Reasonably Available Control Measures are required by Regulation VIII during construction and operation activities to help reduce the amount of particulate matter. Some examples of Reasonably Available Control Measures include the application of water or chemical soil stabilizers to disturbed

soils, the reduction of construction vehicle speed, the covering of haul vehicles, and some form of approved Track-Out Prevention device at access points where unpaved surface adjoins paved surface. ICAPCD Rule 424 regulates the sale of architectural coatings and limits the VOC content in paints. While this rule does not apply directly to this Project, it does dictate the VOC content in paints and paint solvents that are available for use during construction.

The ICAPCD has also established significance thresholds in the 2017 ICAPCD CEQA Air Quality Handbook for the preparation of air quality impact assessments (ICAPCD 2017). The screening criteria within this handbook can be used to determine whether a project's total emissions would result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. Table 4.1-1 shows the screening thresholds for construction emissions.

Table 4.1-1
ICAPCD Air Quality Significance Thresholds

Pollutant	Construction Criteria Pollutants Mass Daily Thresholds (Pounds per Day)
ROG	75
NO_x	100
CO	550
PM_{10}	150

Source: ICAPCD 2017.
Notes: ICAPCD = Imperial County Air Pollution Control District; ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; PM_{10} = coarse particulate matter.

ICAPCD Rules

Emissions that would result from mobile, area, and stationary sources during construction and operation of the Proposed Project are subject to the rules and regulations of ICAPCD, which include:

1. **Rule 407 – Nuisances:**[3] This rule forbids the emission of air contaminants or other materials that would cause a nuisance to the public, including non-agricultural related odors.
2. **Rule 800 – General Requirements for Control of Fine Particulate Matter (PM_{10}):**[4] This rule requires actions to prevent, reduce, or mitigate PM_{10} emissions from anthropogenic (human-made) fugitive dust (PM_{10}) sources generated from within Imperial County.

[3] Rule 407 Nuisances: https://www.arb.ca.gov/drdb/imp/curhtml/R407.HTM.
[4] Rule 800 General Requirements for Control of Fine Particulate Matter (PM_{10}): https://www.arb.ca.gov/drdb/imp/curhtml/R800.PDF.

3. **Rule 801 – Construction and Earthmoving activities:**[5] This rule establishes a 20 percent opacity limit and requires the implementation of a dust management control plan for all non-residential projects of 5 acres or more.
4. **Rule 802 – Bulk Materials:**[6] This rule requires that no person shall cause, suffer, allow or engage in any bulk material handling operation including, but not limited to stacking, loading, unloading, conveying and reclaiming of bulk material, for industrial or commercial purposes without complying with one or more of the requirements of Section F.1 to limit visible dust emissions to a 20 percent opacity limit.
5. **Rule 803 – Carry-Out and Track-Out:**[7] The purpose of this rule is to limit the amount of fine particulate matter (PM_{10}) generated by track-out or carry-out. This rule requires that any person who causes the deposition of bulk material by tracking out or carrying out onto a paved road surface shall comply with the requirements of Section F.1 to prevent or mitigate such deposition
6. **Rule 804 – Open Areas:**[8] This rule requires actions to prevent, reduce or mitigate the amount of fine particulate matter (PM_{10}) result of emissions generated from open areas. Open areas are defined as any open area having 0.5 acres or more within urban areas, or 3.0 acres or more within rural areas, and that contains at least 1,000 square feet of disturbed surface area.
7. **Rule 805 – Paved and Unpaved Roads:**[9] This rule requires that unpaved haul or access roads must comply with the requirements of Section F.1 to limit visible dust emissions to a 20 percent opacity limit.

These rules require owners and operators of construction sites to implement Best Available Control Measures to limit visible dust emissions to 20 percent and to prepare a Dust Control Plan. Dust Control Plans will contain information specified under Section F.2 of Rule 801. IID will work with the ICAPCD to submit, or coordinate from its contractors, an enhanced Dust Control Plan to the Air Pollution Control Officer for approval prior to initiation of construction activities.

Ozone Attainment Plans

2017 State Implementation Plan for the 2008 8-Hour Ozone Standard

The 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard, adopted by the ICAPCD Governing Board on September 12, 2017, sets forth measures and emission-reduction strategies designed to attain the federal 8-hour O_3 standard and maintain this status through the July 20, 2018 (ICAPCD 2017) attainment date, as well as an emissions inventory, outreach, and

[5] Rule 801 Construction and Earthmoving activities: https://www.arb.ca.gov/drdb/imp/curhtml/R801.PDF.
[6] Rule 802 Bulk Materials: https://www.arb.ca.gov/drdb/imp/curhtml/R802.PDF.
[7] Rule 803 Carry-Out and Track-Out: https://www.arb.ca.gov/drdb/imp/curhtml/R803.PDF.
[8] Rule 804 Open Areas: https://www.arb.ca.gov/drdb/imp/curhtml/R804.PDF.
[9] Rule 805 Paved and Unpaved Roads: https://www.arb.ca.gov/drdb/imp/curhtml/R805.PDF.

rate of progress demonstration. On May 4, 2016, the EPA issued a final rule declaring that 11 areas previously classified as marginal nonattainment had failed to attain the 2008 O_3 NAAQS by the applicable attainment date of July 20, 2015, and thus were reclassified as moderate nonattainment areas. Imperial County was identified as one of these areas, since the fourth highest daily maximum 8-hour average O_3 concentration for at least one of its ambient air quality monitors was greater than 0.075 parts per million for the 2012 through 2014 monitoring period. The 2017 State Implementation Plan for the 2008 8-Hour Ozone Standard (2017 Ozone SIP) relies on the provisions in CAA Section 179B to demonstrate that the County is in attainment of the 2008 8-hour ozone standard.

Particulate Matter Attainment Plans

2009 Imperial County State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter

On August 11, 2009, the ICAPCD Governing Board approved the 2009 Imperial County State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter (ICAPCD 2009). In response to the opinion of the U.S. Court of Appeals for the Ninth Circuit (*Sierra Club v. EPA*, 671 F.3d 955) in August 2004, the EPA found that the Imperial Valley PM_{10} nonattainment area had failed to attain by the moderate area attainment date of December 31, 1994, and as a result reclassified the Imperial Valley under the CAA from a moderate to a serious PM_{10} nonattainment area. Also in August 2004, the EPA proposed a rule to find that the Imperial area had failed to attain the annual and 24-hour PM_{10} standards by the serious area deadline of December 31, 2001. The EPA finalized the rule on December 11, 2007, citing as the basis for the rule that six County monitoring stations were in violation of the 24-hour standard over the period from 1999 to 2001. The EPA's final rule action requires the state to submit to the EPA by December 11, 2008, an air quality plan that demonstrates that the County would attain the PM_{10} standard. The 2009 PM_{10} SIP demonstrated that ambient air quality on December 21, 2006, and December 25, 2006, would have attained the 24-hour PM_{10} NAAQS in the absence of impact contributions from Mexicali emissions.

4.1.4 Thresholds of Significance

The significance criteria used to evaluate the project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to air quality would occur if the project would:

1. Conflict with or obstruct implementation of the applicable air quality plan.
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

3. Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors).
4. Expose sensitive receptors to substantial pollutant concentrations.
5. Result in other emission (such as those leading to odors) affecting a substantial number of people.

4.1.5 Impacts Analysis

An Air Quality and Greenhouse Gas Emissions Technical Memorandum was prepared by Dudek in April 2019 and is incorporated into this EIR as Appendix B. The following analysis is based off the findings of this memorandum.

Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less-Than-Significant Impact with Mitigation. An area is designated as "in attainment" when it is in compliance with the federal and/or state standards. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or public welfare with a margin of safety. The Project site is located within the SSAB, which is designated non-attainment for the federal 8-hour O_3 and 24-hour PM_{10} standards. The area is in attainment or unclassified for all other federal standards. The area is designated non-attainment for state standards for 1-hour and 8-hour O_3, 24-hour PM_{10}, and annual PM_{10}. The CEQA Guidelines indicate that a significant impact would occur if a project would conflict with or obstruct implementation of the applicable air quality plan. The ICAPCD is required to prepare and maintain an AQAP and a SIP to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards.

In September 2017, the ICAPCD adopted the 2017 Ozone SIP (ICAPCD 2017). The 2017 Ozone SIP provides a regional strategy to protect public health and protect the climate. To protect public health, the 2017 SIP includes all feasible measures to reduce emissions of O_3 precursors (reactive organic gases and NO_x) and reduce O_3 within the region. While the ICAPCD does not have direct authority over land use decisions, it was recognized that changes in land use and circulation planning were necessary to maintain clean air.

A three-tiered approach was used to assess whether the Project is compliant with the air quality attainment plans applicable to the air basin. The Project would have to be compliant with all three criteria in order to be consistency with the air quality attainment plans. The criteria are as follows:

- The project must be compliant with the thresholds on an individual basis;
- The project must comply with the land use planning strategies in the AQAP or SIP;
- The project must comply with all applicable rules and regulations.

The first criterion to be assessed in this methodology is "the project must be compliant with the thresholds on an individual basis." Although there is no known guidance that correlates AQAP consistency with the ICAPCD regional thresholds, it is common to use the thresholds in assessing AQAP compliance. If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically been over the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

Notably, the estimated commencement date for proposed Project construction is going to occur at a much later date than what was assumed at the time of the 2018/2019 modeling performed by Dudek and for earth disturbance activities much smaller in volume for the Proposed Project than the 3,400 acre-foot capacity project at the time of modeling. However, the construction modeling continues to accurately represent the maximum construction emissions. This is because the scale of earthwork has been downsized and because state and local regulations, restrictions, and increased market penetration of cleaner construction equipment have continued to reduce emissions over time as they will continue to do so into the future. The original construction period is further reduced by three months (from an original 18-month period used for modeling) and will not implement the State Route 98 Detour given that the proposed Project will no longer traverse SR 98.

Project construction emissions are reasonably expected to continue to decline. Thus, by utilizing the earlier modeling start date of 2018, estimated emissions likely overstate actual emission levels at the time of actual construction of the proposed Project because construction is for a shorter duration and a reduction of earthwork movement from what was originally considered for modeling. Therefore, the analysis and modeling included herein continue to provide an accurate and conservative assessment of the proposed Project's construction-related air pollutant emission maximums.

As shown in Table 4.1-2, construction emissions would exceed the NO_x ICAPCD significance threshold. Thus, the Proposed Project would potentially conflict with the 2017 Ozone SIP due to the exceedance of the NO_x ICAPCD significance threshold during construction.

Table 4.1-2
Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Project Component	ROG	NO_x	CO	PM_{10}
	Pounds per Day			
Modelled Year 2018				
Reservoir	3.54	36.22	16.35	55.07
~~State Route 98 Detour[1]~~	~~4.06~~	~~46.97~~	~~28.46~~	~~66.68~~
Canal Tie-Ins	2.68	21.92	20.12	49.00
Sedimentation Basin	11.72	115.34	70.03	76.29
Canal and Measurement Flumes	8.97	87.84	63.31	78.68
Modelled Year 2019				
Reservoir	4.83	44.07	34.77	102.58
Canal Tie-Ins	3.05	25.29	22.01	54.24
Structures	10.71	102.75	67.93	75.93
Maximum Daily	**11.72**	**115.34**	**70.03**	**102.58**
ICAPCD Threshold	*75*	*100*	*550*	*150*
Threshold Exceeded?	No	**Yes**	No	No

[1]Intake Route Alternatives that traverse SR 98 have been eliminated from further consideration.

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; PM_{10} = coarse particulate matter; ICAPCD = Imperial County Air Pollution Control District.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
These estimates reflect control of fugitive dust required by ICAPCD including watering of active sites at least three times per day and limiting vehicle speeds to 15 miles per hour on unpaved roads. See Appendix B for complete results.

The second criterion to be assessed in this consistency methodology is "the project must comply with the land use planning strategies in the AQAP or SIP." Chapter six of the 2017 Ozone SIP contains control measures including measures in the categories of stationary sources, the transportation sector, and the residential and commercial sectors. Depending on the control measure, the tools for implementation include leveraging the ICAPCD rules and permitting authority, regional coordination and funding, working with local governments to facilitate best policies in building codes, outreach and education, and advocacy strategies. Additionally, the 2017 Ozone SIP recognizes that as urban development is spreading out over the landscape, people travel increasing distances between home and work, school, medical care, shopping facilities, recreation, and personal services, the greater the impact. Therefore, the 2017 Ozone SIP, in addition to the ICAPCD CEQA Handbook, have developed strategies in order to reduce project-related vehicle miles traveled within the County. Because the Proposed Project would consist of constructing an unmanned main canal off-line reservoir project and related infrastructure, the Proposed Project would result in minimal vehicle trips after construction. Thus, the Proposed Project would not introduce substantial operational vehicle trips that would contribute to the County's vehicle miles traveled.

The third criterion to be assessed in this consistency methodology is "the project must comply with all applicable rules and regulations." The Proposed Project would comply with all applicable

ICAPCD rules and regulations, including mandatory requirements of Regulation VIII – Fugitive Dust Control Measures, in addition to implementing an Enhanced Dust Control Plan and **Mitigation Measure (MM) AQ-1**, which would reduce fugitive dust emissions generated from excavation and grading activities since the Proposed Project is larger than 5 acres. The Proposed Project would also implement Standard Mitigation Measures for Construction Combustion Equipment, included as **MM-AQ-2**, which would help reduce NO_x emissions generated by construction equipment.

In summary, because the Proposed Project would exceed the NO_x ICAPCD emission-based significance threshold as evidenced in the Table 4.1-2, the Proposed Project would have the potential to conflict with or obstruct implementation of the 2017 Ozone SIP, thus requiring implementation of **MM-AQ-1** and **MM-AQ-2**.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less-Than-Significant Impact with Mitigation. The analysis contained in this section focuses on addressing the potential for the Project to violate any air quality standard or contribute substantially to an existing or projected air quality violation, which is determined by comparing estimated project-generated construction emissions to numeric thresholds established by the ICAPCD.

The ICAPCD has established significance thresholds in the 2017 ICAPCD CEQA Air Quality Handbook for the preparation of air quality impact assessments. The screening criteria within this handbook can be used to determine whether a project's total emissions would result in a significant impact as defined by CEQA. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. As previously discussed, Table 4.1-1 shows the screening thresholds for construction emissions.

Pursuant to the ICAPCD CEQA Air Quality Handbook, regardless of the size of the project, standard mitigation measures for construction equipment and fugitive PM_{10} must be implemented at all construction sites. The implementation of **MM-AQ-1**, as provided in Section 4.2.6, applies to the Proposed Project, as the Proposed Project is 5 acres or more of non-residential development.

Construction Emissions

Construction of the Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emission levels can

only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts. Table 4. 1-2 presents the estimated maximum daily construction emissions generated during construction of the Proposed Project.

The estimated commencement date for Project construction is anticipated to occur at a later date compared to the original construction schedule assumed at the time of modeling provided in Appendix B. However, for the purposes of construction modeling, the models do not need to use the exact commencement and completion dates to accurately represent the Project construction emissions. As previously noted, this is because state and local regulations, restrictions, and increased market penetration of cleaner construction equipment are anticipated to continue to reduce emissions in the future. In other words, because California's construction related emission sources are regulated and will foreseeably continue to be more strictly regulated in the future, Project emissions are reasonably expected to continue to decline. Thus, by utilizing an earlier start date of October 2018, estimated emissions likely overstate actual emission levels. Therefore, the analysis and modeling included herein continue to provide an accurate and conservative assessment of the Project's construction-related air pollutant emissions.

Table 4.1-2 presents a worst-case scenario for construction activities. Construction of the structures and sedimentation are estimated to generate the greatest daily NO_x emissions. Construction activities could result in some overlap with other Project components, because the reservoir construction would occur over a 15-month period and construction of the Holdridge Road canal tie-ins, structures, sedimentation basin, and canal and measurement flume would range from a construction period of up to 3 months within the same 15-month duration as the reservoir. It is assumed that equipment and staff would move accordingly so that the maximum emissions which a Project component could produce would not overlap with another construction component. Therefore, the total daily maximum emissions would present a worst-case scenario. While construction-generated emissions would be temporary and would not represent a long-term source of criteria air pollutant emissions with construction of the reservoir and other Project components would occur over a 15-month period, the Proposed Project would likely exceed the NO_x ICAPCD emission-based significance threshold and would have a potentially significant impact and thus mitigation is required (**MM-AQ-1** and **MM-AQ-2**).

Regarding if the Proposed Project would conflict with the applicable de minimis thresholds, estimated Project construction emissions (in tons per year) are shown in Table 4.1-3 for modelled years 2018 and 2019. As previously discussed, construction of the Proposed Project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (i.e., off-road construction equipment, soil disturbance, and off-site sources (i.e., on-road haul trucks, vendor trucks, and worker vehicle trips). Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather

conditions. Therefore, such emission levels can only be approximately estimated with a corresponding uncertainty in precise ambient air quality impacts.

Table 4.1-3
Estimated Annual Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	PM_{10}
	Tons per Year		
2018*	0.63	5.93	6.45
2019*	0.72	6.96	10.70
Maximum Annual Emissions	**0.72**	**6.96**	**10.70**
De Minimis Threshold	*100*	*100*	*70*
Threshold Exceeded?	No	No	No

Notes: ROG = reactive organic gases; NO_x = oxides of nitrogen; PM_{10} = fine particulate matter.*Modelled year
See Attachment A of Appendix B for detailed results.

As provided in Table 4.1-3, the Proposed Project would not exceed any of the applicable federal de minimis thresholds during construction activities in modelled years 2018 or 2019. Therefore, additional conformity analysis is not required; the Proposed Project would conform to the applicable implementation plan for the Project area.

Operational Emissions

Once operational, the Project would consist of an unmanned, main canal off-line reservoir storage and related infrastructure. No components of the Project would result in the generation of emissions. Thus, no operational impacts would occur.

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 (including releasing emissions which exceed quantitative threshold emissions which exceed quantitative thresholds for ozone precursors)?

Less-Than-Significant Impact with Mitigation. Air pollution is largely a cumulative impact. The nonattainment status of regional pollutants is a result of past and present development, and the ICAPCD develops and implements plans for future attainment of ambient air quality standards. The SSAB has been designated as a federal and state nonattainment area for O_3 and PM_{10}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SSAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Based on these considerations, project-level thresholds of significance for criteria pollutants are used to help determine whether a project's individual emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the ICAPCD significance thresholds, it would be considered to have a

cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

Cumulative localized impacts could occur if the construction of a project component were to occur concurrently with another project. Construction under the Proposed Project would occur over a period of 15 months. Construction schedules for potential future projects near the Proposed Project are currently unknown; therefore, potential construction impacts associated with two simultaneous projects are speculative. The CEQA Guidelines state that if a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact (14 CCR 15145). This analysis is nonetheless provided in an effort to show good-faith analysis and comply with CEQA's information disclosure requirements.

Construction of the Proposed Project would generate reactive organic gases and NO_x emissions (which are precursors to O_3) and emissions of PM_{10} and $PM_{2.5}$. As indicated in Table 4.1-2, Project-generated construction NO_x emissions would likely exceed the ICAPCD emission-based significance threshold. Mitigation measure **MM-AQ-1** and **MM-AQ-2** would reduce impacts to levels below significance. Furthermore, various federal and state regulations, including the Low Carbon Fuel Standard, Pavley Clean Car Standards, and Low Emission Vehicle Program, would serve to reduce the transportation fuel demand and reduce emissions of cumulative projects. Air pollutant emissions associated with construction activity of future projects would be reduced through implementation of control measures required by ICAPCD. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to Regulation VIII – Fugitive Dust Control Measures, which sets forth general and specific requirements for all construction sites in the ICAPCD. The maximum daily PM_{10} and $PM_{2.5}$ emissions would not exceed the significance thresholds during Proposed Project construction activities. Fugitive dust, as well as vehicle and equipment exhaust, generated during Project construction would contribute to the SSAB's nonattainment designation for PM_{10} and $PM_{2.5}$; however, this contribution would not be considered cumulatively considerable.

Based on the previous considerations, the Project would result in a cumulatively considerable increase in emissions of nonattainment pollutants, absent mitigation measures. Impacts would be reduced to levels below significance with implementation of **MM-AQ-1** and **MM-AQ-2.**

Would the project expose sensitive receptors to substantial pollutant concentrations?

Less-Than-Significant Impact. Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed "sensitive receptors" are the most serious hazards of existing air quality conditions in the area. Some land uses are

considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. Sensitive receptors include residences, schools, playgrounds, child-care centers, athletic facilities, long-term health-care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive receptors to the Project site are two single-family residences approximately 150 feet in distance from the Project site.

Health Impacts of Toxic Air Contaminants

"Incremental cancer risk" is the net increased likelihood that a person continuously exposed to concentrations of TACs resulting from a project over a 9-, 30-, and 70-year exposure period would contract cancer based on the use of standard Office of Environmental Health Hazard Assessment risk-assessment methodology (OEHHA 2015). In addition, some TACs have non-carcinogenic effects. TACs that would potentially be emitted during construction activities would be DPM, emitted from heavy-duty construction equipment and heavy-duty trucks. Heavy-duty construction equipment and diesel trucks are subject to CARB Airborne Toxic Control Measures to reduce DPM emissions. According to the OESHA, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period for the maximally exposed individual resident; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, the duration of proposed construction activities (approximately 15 months) would only constitute a small percentage of the total long-term exposure period and would not result in exposure of proximate sensitive receptors to substantial TACs.

Because construction activities would occur within various locations across the 591 acre Project site, the Proposed Project would not require the extensive use of heavy-duty construction equipment or diesel trucks in any one location over the duration of development, which would limit the exposure of any proximate individual sensitive receptor to TACs. In addition, due to the relatively short period of exposure at any individual sensitive receptor (approximately 15 months) and minimal particulate emissions generated on site, TACs generated during construction would not be expected to result in concentrations that could cause significant health risks.

In regard to project operation, the Proposed Project does not include stationary sources that would emit air pollutants or TACs. Project operations would not result in TAC generation from on-site sources during long-term operations and would not result in the creation of a significant health risk at nearby sensitive receptors.

Carbon Monoxide Hotspots

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO "hotspots." CO transport is extremely limited and disperses rapidly with distance

from the source. Typically, high CO concentrations are associated with severely congested intersections operating at an unacceptable level of service (level of service E or worse). Projects contributing to adverse traffic impacts may result in the formation of a CO hotspot. Additional analysis of CO hotspot impacts would be conducted if a project would result in a significant impact or contribute to an adverse traffic impact at a signalized intersection that would potentially subject sensitive receptors to CO hotspots.

Construction activities would be temporary and would not be a source of daily, long-term mobile-source emissions. Accordingly, the Proposed Project would not generate traffic that would contribute to potential adverse traffic impacts that may result in the formation of CO hotspots. In addition, due to continued improvement in vehicular emissions at a rate faster than the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SSAB is steadily decreasing. Based on these considerations, the Proposed Project would result in a less than significant impact to air quality with regard to potential CO hotspots.

Health Impacts of Criteria Air Pollutants

Construction of the Proposed Project would generate criteria air pollutant emissions which would result in the exceedance of the ICAPCD emission-based significance threshold for emissions of NO_x. As previously discussed, the SSAB is a nonattainment area for O_3 and PM_{10} under the NAAQS and/or CAAQS.

Reactive Organic Gases and NO_x (Precursors to O_3): The Proposed Project involves construction activities that would be completed within 15 months and would not result in reactive organic gas emissions that would exceed the ICAPCD thresholds. However, the Proposed Project would result in the exceedance of emissions of NO_x. Notably, the closet sensitive receptors to the Project site are located approximately 150 feet, or 0.2 miles, away, a sufficient distance such that sensitive receptors would not be expected to be affected by construction activities. In addition, the existing NO_2 concentrations within the region are below the NAAQS and CAAQS. Therefore, the Proposed Project is not anticipated to substantially contribute to regional O_3 concentrations and associated health impacts.

CO: The associated CO hotspots were discussed previously as a less-than-significant impact. Thus, the Proposed Project's CO emissions would not contribute to the health effects associated with this pollutant.

PM_{10} and $PM_{2.5}$: The Proposed Project would not generate emissions of PM_{10} and $PM_{2.5}$ that would exceed the ICAPCD's thresholds and is not expected to cause any increase in related regional health effects for these pollutants.

Accordingly, the Proposed Project would not result in adverse health impacts associated with those pollutants for which the region is in nonattainment. Impacts would be less than significant.

Would the project result in other emission (such as those leading to odors) adversely affecting a substantial number of people?

Less-Than-Significant Impact. Projects with the potential to expose a substantial number of people to objectionable odors would be deemed to have a significant impact under CEQA. Land uses commonly considered to be potential source of odorous emissions include wastewater treatment plants, sanitary landfills, food processing facilities, chemical manufacturing plants, rendering plants, paint/coating operations, and concentrated agricultural feeding operations and dairies.

No major sources of odors were identified in the vicinity of the Project site that could potentially affect proposed on-site land uses. However, construction of the Proposed Project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. Construction emissions can vary substantially day to day, depending on the level of activity, the specific type of operation, and for dust, the prevailing weather conditions. Any odor generation would be intermittent and would terminate upon completion of the construction phase of the proposed action. Furthermore, construction activity would occur at various locations within the Project site and would not be situated in the same location for an extended period of time. The nearest receptors are 150 feet, or 0.2 miles, in distance from the Proposed Project site, otherwise there are no other sensitive receptors within 5,000 feet (0.95 miles) of the Project site. As such, the site is surrounded by few people and therefore cannot create objectionable odors affecting a substantial number of people.

Operations of the Project would include the conveyance of AAC water for temporary storage in the proposed reservoir. The generation of objectionable odors is typically not associated with operation and maintenance of water infrastructure projects. Water would not be stagnant, as water would be routinely routed to the EHL Canal and to agricultural lands in the eastern Imperial Valley. The Project design does not include the construction or installation of structures and/or permanent equipment that would release objectionable odors. In addition, the site is surrounded by few people and therefore cannot create objectionable odors affecting a substantial number of people. Therefore, impacts would be less than significant related to objectionable odors affecting a substantial number of people; no mitigation is required.

4.1.6 Mitigation Measures

Implementation of the following mitigation measures would reduce identified impacts on air quality to less than significant.

MM-AQ-1 Fugitive PM_{10} Dust Control Mitigation Measures

Prior to issuance of a grading or building permit, the Project proponent shall submit an enhanced dust control plan to the Imperial County Air Pollution Control District for review and approval to ensure Project compliance with ICAPCD Regulation VIII (Fugitive Dust Regulations), Rules 800 through 806. The plan shall address construction-related dust as required by ICAPCD, including, but not limited to the following:

- Water exposed soil with adequate frequency for continued moist soil.
- Replace ground cover in disturbed areas as quickly as possible.
- Vehicle speed for all construction vehicles shall not exceed 15 miles per hour on any unpaved surface at the construction site.

MM-AQ-2 ICAPCD Standard Measures for PM_{10} Dust Control

Pursuant to ICAPCD, all construction sites, regardless of size, must comply with the requirements contained within Regulation VIII-Fugitive Dust Control Measures. These mitigation measures listed below, in addition to any measures identified under an enhanced dust control plan, shall be implemented prior to and during construction. The Imperial County Department of Public Works will verify implementation and compliance with these measures.

ICAPCD Standard Measures for Fugitive Dust (PM_{10}) Control

1. The operator shall ensure that all disturbed areas, including bulk material storage which is not being actively utilized, will be effectively stabilized and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material such as vegetative ground cover.
2. The operator shall ensure that all on-site and off-site unpaved roads will be effectively stabilized and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants and/or watering.
3. The operator shall ensure that all unpaved traffic areas with 75 or more average vehicle trips per day will be effectively stabilized and visible emissions will be limited to no greater than 20 percent opacity for dust emissions by paving, chemical stabilizers, dust suppressants, and/or watering.
4. The operator shall ensure that all transport (import or export) of borrow materials used as cover material will be completely covered unless six inches of freeboard space from the top of the container is maintained with no spillage and loss of burrow material. In

addition, the cargo compartment of all haul trucks is to be cleaned and/or washed at delivery site after removal of bulk material.

5. The operator shall ensure that all track-out or carry-out will be cleaned at the end of each workday.
6. The operator shall ensure that all movement of borrow material handling or at points of transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers or by sheltering or enclosing the operation and transfer line.

ICAPCD Standard Measures for Construction Combustion Equipment

1. The operator shall ensure the use of Tier 2 vehicles or the equivalent of alternative fueled or catalyst equipped diesel construction equipment.
2. The operator shall ensure that idling will be minimized by shutting equipment off when not in use or reducing the time of idling to 5 minutes as a maximum.
3. The operator shall limit, to the extent feasible, the hours of operation of heavy-duty equipment and/or the amount of equipment in use.
4. The operator shall, where practicable, replace fossil fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).

Enhanced Mitigation Measures for Construction Combustion Equipment

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways.
- Implement activity management (e.g., rescheduling activities to reduce short-term impacts).

4.1.7 Level of Significance After Mitigation

With implementation of **MM-AQ-1** and **MM-AQ-2**, potentially significant impacts to air quality would be reduced to levels below significant for the Proposed Project.

4.2 BIOLOGICAL RESOURCES

This section describes the existing biological resources, and potential impacts relating to biological resources resulting from the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project). The analysis herein is based on review of existing resources; technical data; applicable laws, regulations and guidelines; and the Supplemental Biological Assessment (BA) which incorporates and summarizes a previously completed Biological Resources Technical Report (BTR) prepared for an expanded study area. The BTR and Supplemental BA are included as Appendix C to this EIR.

4.2.1 Existing Conditions

4.2.1.1 Environmental Setting

The Proposed Project is located in Imperial County, California, southeast of the Salton Sea, west of the Imperial Sand Dunes and east of Calexico, as shown on **Figure 1-1**, Project Site, and **Figure 1-2**, Vicinity Map, in Chapter 1, Introduction. The Proposed Project basin area is located approximately 3 miles north of the Mexican Border, and the intake channel initiates just north of SR- 98 (outside of Caltrans right-of-way). The Proposed Project site is located within the Sonoran Desert which is bounded on the west by the Peninsular Ranges and on the east by the Colorado River. The Proposed Project site is relatively flat and ranges from approximately 30 feet above mean sea level (amsl) at its western extent to 50 feet near SR-98. The dominant topography of the Proposed Project site consists of flat fallow agriculture fields.

Vegetation Communities

The expanded Study Area consists of six vegetation communities (arrow weed thickets, bush seepweed scrub, cattail marshes, creosote bush scrub, mesquite bosque/mesquite thicket, and tamarisk thickets) and four land covers (disturbed land, general agriculture, open water, and urban/ developed). Of these vegetation communities, the arrow weed thickets, bush seepweed scrub, and mesquite bosque are considered sensitive biological resources. Special-status plant species have potential to occur within the portions of the Action Area that are not characterized as agriculture, developed, isolated or disturbed. Therefore, the rare plant survey area was limited to portions of the Study Area that were identified as potentially suitable for the target species which included areas characterized as desert scrub and riparian in the northeast and southeast corners of the Study Area. Only the northeast portion of the expanded Study Area overlaps with the Proposed Project footprint (25 acres). See **Figure 4-1** Study Area and Rare Plant Survey Area. Vegetation communities and land cover types and their acreages are presented in the proceeding Table 4.2-1 for the proposed Project site.

Table 4.2-1
Vegetation Communities and Land Covers

General Habitat	Vegetation Community or Land Cover Type[a]	Project Area
Marsh	Cattail marshes	0.21
	Marsh Subtotal	***0.21***
Low to High Elevation Riparian Scrub	Arrow weed thickets Alliance[b]	0.15
	Tamarisk thickets	10.35
	Low to High Elevation Riparian Scrub Subtotal	***10.50***
Chenopod Scrub	Bush seepweed scrub	11.96
	Chenopod Scrub Subtotal	***11.96***
Sonoran and Mojavean Desert Scrub	Creosote bush scrub	2.43
	Sonoran and Mojavean Desert Scrub Subtotal	***2.43***
Disturbed and Developed	Disturbed habitat	34.09
	General agriculture	446.41
	Open water	0.30
	Disturbed and Developed Subtotal	***480.8***
	Total[c]	**505.87**

5Notes:
[a] Based on CDFG 2010.
[b] Considered special status by CDFW (CDFG 2010)).
[c] May not sum precisely due to rounding.

As shown in Table 4.2-1, the Project area consists of five vegetation communities; of these vegetation communities, the arrow weed thickets and bush seepweed scrub are considered sensitive biological resources.

Cattail Marshes Alliance

The cattail marshes alliance (*Typha* [*angustifolia, domingensis, latifolia*] alliance) includes cattails as the dominant or co-dominant herb in the herbaceous layer. Cattail marshes alliance has a continuous to intermittent canopy less than 1.5 meters (4.9 feet) in height (Sawyer et al. 2009). For a stand of vegetation to be classified as cattail marshes, cattails (*Typha* ssp.) must be greater than 50% relative cover in the herbaceous layer. The cattail marshes alliance occurs throughout California at elevations ranging from sea level to 350 meters (1,148 feet) amsl. The cattail marshes alliance occurs on clay or silty soils in semi-permanently flooded freshwater or brackish marshes (Appendix C). Cattail marshes occur within the Proposed Project site within the All-American Drain 2 which is a seepage recovery drain. On-site cattail marshes alliance is characterized as having greater than 50% relative cover of southern cattail (*Typha domingensis*). Other species present at a low cover include arrow weed (*Pluchea sericea*). The cattail marshes alliance has a rank of G5S5; therefore, are not considered a sensitive biological resource under CEQA (CDFW 2022). However, it is a wetland community, which is typically afforded protection under CEQA and the Clean Water Act (CWA).

Riparian Scrub

The arrow weed thickets alliance (*Pluchea sericea* alliance) includes arrow weed as the dominant or codominant shrub in the canopy. Arrow weed thickets have an intermittent to continuous shrub canopy less than 5 meters (16 feet) in height and a sparse ground layer with seasonal annuals. For a stand of vegetation to be classified as arrow weed thickets, arrow weed must be greater than or equal to 2% absolute cover in the shrub canopy. This alliance occurs in wetlands that are seasonally flooded and saturated with fresh water located around seeps, canyon bottoms, irrigation ditches, stream sides, and washes (Appendix C). Arrow weed thickets occurs along the banks of the All-American Drain 2. On-site, arrow weed thickets are characterized as having 25%–50% absolute cover of arrow weed in the shrub canopy. Other species noted in this association include five-stamen tamarisk, alkali goldenbush (*Isocoma acradenia* var. *eremophila*), and salt grass (*Distichlis spicata*). The arrow weed thickets alliance is ranked as a G4S3 alliance; therefore, it is considered a sensitive biological resource under CEQA (CDFW 2022).

Chenopod Scrub

The bush seepweed alliance (*Suaeda mosquinii* alliance) includes alkali goldenbush or bush seepweed as the dominant or codominant shrub in the canopy. Bush seepweed scrub has an open to continuous shrub canopy less than 1.5 meters (5 feet) in height and a sparse ground layer with seasonal annuals. For a stand of vegetation to be classified as bush seepweed alliance, alkali goldenbush must be greater than 50% relative cover in the shrub canopy or be characteristically present in the herbaceous layer; or bush seepweed must be greater than 2% absolute cover or 50% relative cover in the shrub canopy. This alliance occurs in flat to gently sloping landscapes, playas, toes of slopes and bajadas on saline or alkaline soils (Appendix C). On site, bush seepweed is entirely dominated by alkali goldenbush and does not have any bush seepweed in its species composition; however, there are no other alliances with alkali goldenbush as a dominant or codominant species. It occurs in the undisturbed area in the northeastern portion of the study area. On site, bush seepweed scrub is characterized as having 25%–50% absolute cover of alkali goldenbush in the shrub canopy. Other species noted in this association include fanleaf crinklemat (*Tiquilia plicata*), Arabian schismus (*Schismus arabicus*), and desert palafox (*Palafoxia arida*). The bush seepweed scrub alliance is ranked as a G4S3 alliance; therefore, it is considered a sensitive biological resource under CEQA (CDFW 2022).

The tamarisk thickets or *Tamarix* spp. semi-natural stands alliance includes the non-native invasive tamarisk as the dominant shrub in the canopy. Tamarisk thickets have a continuous to open shrub canopy less than 8 meters (26 feet) in height with possible emergent trees and a sparse ground layer (Sawyer et al. 2009). For a stand of vegetation to be classified as tamarisk thickets, tamarisk must be greater than 3% absolute cover and 60% relative cover in the shrub canopy. This semi-natural stand occurs in and along ditches, rivers, washes, lake margins, and watercourses

(Appendix C). Tamarisk thickets occur along the bottom of a berm created from a concrete-lined irrigation canal (which was dry at the time of the surveys) as well as in the undisturbed land in the northeast corner where it is not associated with a canal. On-site, tamarisk thickets are characterized as having 25%–75% absolute cover of five-stamen tamarisk in the shrub canopy. Other species noted in this semi-natural stand include alkali goldenbush at low to moderate cover. Tamarisk thickets semi-natural stands are not considered a sensitive biological resource under CEQA (CDFW 2022).

Sonoran and Mojavean Desert Scrub

The creosote bush scrub alliance (*Larrea tridentata* alliance) has an open to intermittent shrub canopy cover with shrubs less than 3 meters (10 feet) in height with a open to intermittent ground layer containing seasonal annuals or perennial grasses (Sawyer et al. 2009). For a stand of vegetation to be classified as creosote bush scrub, creosote must exceed other shrubs in cover including emergent small trees and taller shrubs except for white bursage. The creosote bush scrub alliance occurs in the Mojave, Sonoran, and Colorado Deserts; southeastern Great Basin; and Southern California mountains and valleys. This alliance occurs at elevations ranging from 75 meters (246 feet) below sea level to 1,000 meters (3,280 feet) amsl. The creosote bush scrub alliance occurs on upland slopes, alluvial fans, bajadas, and intermittent washes (Appendix C). The creosote bush scrub alliance occurs in the southern portion of the Proposed Project study area, between SR-98 and the AAC. On site, the creosote bush scrub alliance is characterized as having 15% to 25% absolute cover of creosote bush in the shrub canopy. Other species noted in this alliance include white bursage and alkali goldenbush with an understory composed of Arabian schismus. The creosote bush scrub alliance is ranked by CDFW as a G5S5 alliance; therefore, CDFW does not consider the creosote bush scrub alliance a sensitive biological resource under CEQA (CDFW 2022).

Disturbed and Developed

Disturbed habitat refers to areas that are not developed yet lack vegetation, and generally are the result of severe or repeated mechanical perturbation. Areas mapped as disturbed land include primarily dirt roads, but also include areas that have been a result of repeated disturbance (e.g., grading/disking). Disturbed habitat typically does not support any vegetation; therefore, disturbed lands are not considered a sensitive biological resource under CEQA (CDFW 2022).

Agricultural land includes the following agricultural types: agriculture (general), nurseries, orchard agriculture, pastures and crop agriculture, tilled earth, and vineyard–shrub agriculture. Nearly the entire Proposed Project study area is mapped as general agriculture occur. All of the agricultural fields were fallow at the time of the surveys with the exception of the land to be used

for the intake channel. General agriculture is not considered a sensitive biological resource under CEQA (CDFW 2022).

The open water mapping unit is not recognized by the Natural Communities List (CDFW 2022). Open water consists of standing water with no emergent vegetation. Open water is mapped within All-American Drain 2. Open water does not support any vegetation; therefore, open water is not considered a sensitive biological resource under CEQA (CDFW 2022).

Jurisdictional Delineation and Determinations

Dudek performed a formal jurisdictional delineation within the Proposed Project study area in January 2018, with methods described in detail under Section 4.2.1.2, Methodology. A total of two data stations were collected. Representative photographs and the results of the delineations are included in Appendix C.

Federal Jurisdiction

The Proposed Project study area and project site contains the AAC Reach. While the AAC is subject to federal jurisdiction under Section 404 of the CWA, the AAC Reach is a direct diversion from the AAC. The AAC flows east to west originating at the Imperial Dam located approximately 30 miles northeast of Yuma, Arizona, on the Colorado River. Water is diverted from the Imperial Dam into the AAC where it continues to flow west, just west of the City of Calexico, California, before the last branch heads north and terminates in the Imperial Valley for agricultural purposes. The AAC waters ultimately flow into the Salton Sea (a Traditional Navigable Water) and thus the AAC is connected to the Salton and therefore considered waters of the U.S. pursuant to 33 CFR 325.9. An AAC guidance list of exempt activities was developed to provide clarity in the application of regulation under Section 404 Clean Water Act related to activities conducted along the AAC, such as the AAC Reach. The USACE issued a No Permit Required determination for any direct connection to the AAC on November 16, 2019 pursuant to 33 CFR 323.4 (a)(1)(i). Therefore, based on review of the letter provided by USACE, and considering the proposed Project is not a direct connection to the AAC, a Section 404 Permit will not be required for the Proposed Project.

State Jurisdiction

Water resources are also subject to state laws administered by CDFW and RWQCB. Resources subject to the jurisdiction of the CDFW pursuant to Section 1602 of the California Fish and Game Code and RWQCB pursuant to the Porter–Cologne Water Quality Control Act (Porter–Cologne Act) include ephemeral, intermittent, and perennial stream channels. Based on the intake channel proposed location over a small seepage collection drain and its landcover types, there are approximately 0.21 acres of wetlands that may be under the jurisdiction of RWQCB, as described

in Table 4.2-2. These areas met all three parameters for a wetland: hydrology, hydrophytic vegetation, and hydric soils.

Table 4.2-2
Jurisdictional Waters of the State in the Proposed Project Site Area

Jurisdiction	Vegetation Community	Acreage
Wetland (RWQCB/CDFW)	Cattail marshes	0.21
Non-Wetland Water – Perennial (RWQCB/CDFW)	Open water	0.30
Riparian Vegetation (CDFW)	Arrow weed scrub	0.15
	Total[a]	**0.66**

Notes: RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.
[a] May not sum precisely due to rounding.

The wetlands on the site are associated with the All-American Drain 2, which is a seepage recovery drain, located in the southern portion of the intake area. This drain originates in the BLM land east of the study area and outlets into the East Highline Canal. It supports perennial water and scattered cattails in the drain bottom with arrow weed growing along the banks. Vegetation communities and/or land covers that may be subject to regulation by RWQCB and/or CDFW include arrow weed thickets and open water.

Plant Resources

A total of 20 species of native or naturalized vascular plants, 12 native (60%) and 8 non-native (40%), were recorded within the expanded Study Area (see Appendix C). As noted in the discussion of survey limitations, surveys were conducted in January 2018 by Dudek, which resulted in detection and identification of most perennial plant species that occur in the area. Dudek recommended focused surveys for special-status plants based on suitable habitat at the Project site: 1) gravel milk vetch (*Astragalus sabulomum*; 2) Abram's spurge (*Euphorbia abramsiana*; 3) California satintail (*Imperata brevifolia)*; and 4) Sand food (*Pholisma sonorae).*

Gravel Milk-Vetch, a CRPR 2B.2, is an annual herb in the legume family (Fabaceae) that occurs within creosote bush scrub. This species occurs in Imperial, Inyo, Riverside, and San Diego Counties between 160 feet below mean sea level and 2,950 feet amsl. Gravel milk-vetch blooms from February to July. Suitable desert scrub vegetation is present within portions of the Proposed Project study area (Appendix C).

Abram's Spurge, a CRPR 2B.2, is an annual herb in the spurge family (Euphorbiaceae) that occurs within sandy flats. This species occurs in Imperial, Riverside, San Bernardino, and San

Diego Counties below 650 feet amsl and blooms from September to November. Suitable desert scrub vegetation is present within portions of the Proposed Project study area (Appendix C).

California Satintail, a CRPR 2B.1, is a perennial grass in the grass family (Poaceae) that occurs within chaparral, coastal sage scrub, creosote bush scrub, and wetland-riparian vegetation communities. This species occurs in 13 counties in California, including Imperial, Los Angeles, and Riverside Counties below 1,640 feet amsl and blooms between September to May. Suitable desert scrub and riparian vegetation is present within portions of the Proposed Project study area (Appendix C).

Sand Food, a CRPR 1B.2, is perennial parasitic herb in the borage family (Boraginaceae) that occurs on sandy soils desert dunes and Sonoran desert scrub. This species occurs in Imperial County from sea level to 656 feet amsl and blooms from April to June. Suitable desert scrub vegetation is present within portions of the project (Appendix C).

Special-status plant surveys were conducted in April 2020 and September of 2022 by Rincon to adequately capture the blooming period for the four targeted species. None of the four target species or other special-status plant species were observed during the focused rare plant surveys in April of 2020 and September of 2022. Dominant plant species within the survey area included creosote bush (*Larrea tridentata*), Arabian schismus (*Schismus arabicus*), tamarisk (*Tamarix chinensis*), annual burweed (*Ambrosia acanthicarpa*), alkali goldenbush (*Isocoma acradenia*), arrow weed (*Pluchea sericea*), Russian thistle (*Salsola tragus*) and Bermuda grass (*Cynodon dactylon*). Additionally, the level of disturbance within the survey area was high due to unimproved but heavily-traveled dirt roads, off-highway vehicle use, previous agricultural use and invasion of non-native, exotic plant species.

Wildlife Resources

A total of 22 wildlife species were recorded within the Proposed Project study area by Dudek. Nineteen bird species were observed, including common raven (*Corvus corax*), black phoebe (*Sayornis nigricans*), mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), and American kestrel (*Falco sparverius*). One mammal species, coyote (*Canis latrans*), was detected within the study area. Two invertebrate species were observed: harvester ant (*Pogonomyrmex* sp.) and queen butterfly (*Danaus gilippus*) (Appendix C).

No focused special-status wildlife surveys were conducted in 2018. Five special-status wildlife species were observed during the 2018 biological surveys: burrowing owl (*Athene cunicularia*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), northern harrier (*Circus hudsonius*), prairie falcon (*Falco mexicanus*), and loggerhead shrike (*Lanius ludovicianus*). Dudek noted other special-status wildlife species have the potential to occur in the

Proposed Project study area based on a literature review and observations made during the 2018 site visits as noted in Table 4.2-3.

Table 4.2-3
Special-Status Wildlife Species Potential to Occur in the Proposed Project Study Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Reptiles				
Gopherus agassizii	desert tortoise	FT/ST	Sandy flats to rocky foothills, including alluvial fans, washes and canyons	Moderate potential to occur. Areas near the AAC (outside study area), are considered highly predicted habitat (CDFW, 2017).
Kinosternon sonoriense	Sonoran mud turtle	None/SSC	Various bodies of water such as streams, shallow pools and even large puddles.	Not likely to occur in project area (CDFW, 2017).
Phrynosoma mcallii	flat-tailed horned lizard	None/SSC	Desert washes and flats with sparse low-diversity vegetation cover and sandy soils	No suitable habitat was present within the Project site or surrounding the study area.
Uma notata	Colorado Desert fringe-toed lizard	None/SSC	Sparsely-vegetated arid areas with fine wind-blown sand, including dunes, flats, washes, and the banks of rivers.	No suitable habitat present within the Project site or surrounding the study area.
Birds				
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Observed on site during the January 2018 survey. High potential to nest on or adjacent to the study area.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Observed on site during the January 2018 survey. The study area is outside of this species' yearlong range (Collins 1999), but may have been wintering or migrating through the site.
Buteo regalis (wintering)	ferruginous hawk	BCC/WL	Winters and forages in open, dry country, grasslands, open fields, agriculture	Moderate potential to occur on site during the winter. Suitable foraging habitat present.
Circus hudsonius (nesting)	northern harrier	None/SSC	Nests in open wetlands (marshy meadows, wet lightly-grazed pastures, old fields, freshwater and brackish marshes); also in drier habitats (grassland and	Observed foraging on site during the January 2018 survey. Unlikely to nest on site because the study area is outside of its known

Table 4.2-3
Special-Status Wildlife Species Potential to Occur in the Proposed Project Study Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
			grain fields); forages in grassland, scrubs, rangelands, emergent wetlands, and other open habitats	nesting range (Smith et al. 2011).
Empidonax traillii extimus	Southwestern willow flycatcher	FE/TE	Nests in mature, multi-tiered riparian woodland habitat with a high percentage of canopy cover where surface water is present or soil moisture is high enough to support suitable tree species	Moderate potential to occur near East Highline Canal and AAC (IPAC, 2023).
Falco mexicanus (nesting)	prairie falcon	BCC/WL	Forages in grassland, savanna, rangeland, agriculture, desert scrub, alpine meadows; nest on cliffs or bluffs	Observed foraging on site during the January 2018 survey. Unlikely to nest on site due to disturbance and lack of nesting areas.
Lanius ludovicianus (nesting)	loggerhead shrike	BCC/SSC	Nests and forages in open habitats with scattered shrubs, trees, or other perches	Observed on site during the January 2018 survey. High potential to nest on or adjacent to the study area in scrub or tree habitat.
Laterallus jamaicensis coturniculus	California black rail	BCC/ST, FP	Tidal marshes, shallow freshwater margins, wet meadows, and flooded grassy vegetation; suitable habitats are often supplied by canal leakage in Sierra Nevada foothill populations	Moderate potential to occur in the All American Canal further southeast (CDFW 2018).
Rallus obsoletus yumanensis	Yuma Ridgway's rail	FE/ST, FP	Freshwater marsh dominated by *Typha* spp., *Scirpus* spp., *Schoenoplectus* spp., and *Bolboschoenus* spp.; mix of riparian tree and shrub species along the marsh edge; many occupied areas are now constructed, such as managed ponds or effluent-supported marshes	Moderate potential to occur in the All American Canal further southeast (CDFW 2018).
Mammals				
Sigmodon hispidus eremicus	Yuma hispid cotton rat	None/SSC	Drainage ditches, canals and seeps vegetated with plants such as arrow weed, salt grass, common reed, screwbeans, cattails, sedges, tamarisk, heliotrope and annual grasses	High potential to occur in the portions of the study area. Suitable habitat present throughout and surrounding the study area.

Table 4.2-3
Special-Status Wildlife Species Potential to Occur in the Proposed Project Study Area

Scientific Name	Common Name	Status (Federal/ State)	Habitat	Potential to Occur
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Moderate potential to occur. There is some potential suitable habitat present in the study area.

Status Legend:
Federal
FE**:** Federally endangered
FT: Federally threatened
BCC: U.S. Fish Wildlife Service bird of conservation concern
State
SSC: California species of special concern
ST: State threatened
FP: California fully protected species
WL: California watch list

Desert Tortoise- The desert tortoise *(Gopherus agassizi)* is a California threatened species that inhabits the Mojave desert region in the southwestern United States. The species' habitat exists north and west of the Colorado River, extending through Arizona, Utah, Nevada and California's deserts. The desert tortoise is capable of surviving in the wide variety of habitats which comprise the arid desert ranging from rocky foothills to washes and canyons. The far southwestern boundary of the desert tortoise's habitat in California is Imperial County's East Mesa and Chocolate Mountains excepting a small localized area west of the Yuha Desert near the Jacumba Mountains. Biological surveys were conducted by Rincon in May 2020. No desert tortoises were observed during this time.

Sonoran Mud Turtle- The Sonoran Mud Turtle ***(****Kinosternon sonoriense)* is listed in California as an Amphibian and Reptile Species of Special Concern. The species inhabits muddy shallow water systems within the Sonoran Desert region including the lower Colorado River near Yuma, Arizona. The nearest known Sonoran Mud Turtle habitat is approximately 30 miles from the project site near Pilot Knob, a geologic feature in eastern Imperial County. Biological surveys were conducted at the project site by Rincon in May 2020. No Sonoran Mud Turtles were observed during the surveys. The species is not likely to occur within the project area.

Flat-Tailed Horned Lizard- The flat-tailed horned lizard (*Phrynosoma mcallii*) (FTHL) is a California species of special concern (SSC) that occupies the Coachella Valley at its northern range limit and extends southeast to the Imperial and Borrego valleys and into Baja California, Mexico. The western limit of the species' range is Anza-Borrego Desert State Park in eastern San Diego County, and to the east they are found in Glamis and Ogilby northwest of Yuma, Arizona, and then into the lower Colorado subdivision of the Sonoran Desert in Arizona. Suitable habitat is

characterized as stabilized sand dunes that fall within the creosote-white bursage series of Sonoran Desert Scrub community. They also occur in loose, active sand dunes, although often at the dune periphery or in more stable regions within the active dune habitat. The FTHLs almost exclusively feed on harvester ants, but opportunistically eat small beetles, caterpillars, and termites.

Focused surveys were conducted by Rincon in May 2020. No FTHL or scat were observed during the focused surveys. Additionally, the level of disturbance within the survey area was high due to unimproved but heavily traveled dirt roads, off-highway vehicle use, previous agricultural use and invasion of non-native, exotic plant species. Flat-tailed horned lizard food sources (e.g., harvester ants) were scarce, with only one harvester ant hill detected within the survey area. Therefore, overall habitat quality for FTHL is considered low to moderately suitable depending on the location within the survey area. Additionally, no known occurrences of flat-tailed horned lizard have been identified within two miles of the Study Area (CDFW 2020). In accordance with *Flat-tailed Horned Lizard Interim Survey*.

Colorado Desert Fringed Lizard- The Colorado Desert Fringe-Toed Lizard (*Uma notata*) falls under California's Amphibian and Reptile Species of Special Concern List. The species inhabits arid desert habitats with fine wind-blown sands similar to the areas surrounding the study area. The Fringe-toed lizards feed on insects and plant material on the sand surface. No Colorado Desert Fringe-Toed Lizards were discovered during the biological surveys conducted by Rincon in 2020, however, the study area falls within the known habitat of the species. The study area does not contain any suitable habitat for the species.

Burrowing Owl- The burrowing owl is an SSC and a USFWS bird of conservation concern (BCC) that inhabits much of California. Burrowing owls prefer open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. They usually nest in the old burrow of a ground squirrel, badger, or other small mammal, although they may dig their own burrow in soft soil. Their prey consists mostly of insects, small mammals, reptiles, birds, and carrion. No focused surveys were conducted for the burrowing owl, although the species is relatively detectable during the morning hours, when many surveys took place. No burrowing owls were detected in the Proposed Project study area during the 2018 biological surveys, however, burrowing owls readily colonize new areas considering suitable habitat is present.

Ferruginous Hawk- The ferruginous hawk (*Buteo regalis*) is a BCC and a California watch list (WL) species. Ferruginous hawk occurs throughout western North America from southernmost Canada between the Great Plains and Rocky Mountains, south to northern Arizona and New Mexico. This species breeds from southeast Alberta and extreme southwest Manitoba south to the northwest corner of Texas, and west to the Great Basin, Columbia River Basin regions of eastern Oregon, and southeast Washington. Ferruginous hawk most commonly winters from Southern

California, Colorado, Arizona, and New Mexico to northern Texas. Northern populations are completely migratory, and birds from southern breeding locations appear to migrate short distances or to be sedentary (Ng et al. 2017). Ferruginous hawk is an uncommon winter resident and migrants at lower elevations and open grasslands in the Modoc Plateau, Central Valley, and Coast Ranges of California (Appendix C).

Northern Harrier- The northern harrier is an SSC. Northern harriers use a wide variety of open habitats in California, including deserts, coastal sand dunes, pasturelands, croplands, dry plains, grasslands, estuaries, flood plains, and marshes. This species can also forage over coastal sage scrub or other open scrub communities. They nest in western San Diego County in areas associated with marshes, pastures, grasslands, prairies, croplands, desert shrub-steppe, and riparian woodland. Winter habitats similarly include a variety of open habitats dominated by herbaceous cover. Northern harrier populations are most concentrated in areas with low vegetation (Appendix C).

Southwestern Willow Flycatcher- The Southwestern Willow Flycatcher *(Empidonax traillii extimus)* is listed as a Federally Endangered and State Threatened species. The Flycatcher's primary habitat consists of riparian woodland habitat with dense coverage where they mainly feed on insects. They frequently inhabit areas with surface water or high soil moisture.

Prairie Falcon- The prairie falcon is a BCC and a WL species. Prairie falcon is found from southeastern deserts northwest throughout the Central Valley and along the inner Coast Ranges and Sierra Nevada. This species uses a variety of open habitats, including annual and perennial grasslands, savannahs, rangeland, agricultural fields, desert scrub, and alpine meadows. Prairie falcon requires sheltered cliff ledges for cover and dives from a perch of 50 to 300 feet above ground to catch prey in the air and on the ground in open areas. This species primarily eats small mammals, small birds, and reptiles (Appendix C).

Loggerhead Shrike- The loggerhead shrike is a BCC and an SSC. It is found in lowlands and foothills throughout California, and it remains in the southern portion of the state year-round. Preferred habitats for the loggerhead shrike are open areas that include scattered shrubs, trees, posts, fences, utility lines, or other structures that provide hunting perches with views of open ground, as well as nearby spiny vegetation or built structures (such as the top of chain-link fences or barbed wire) that provide means to skewer prey items. This species occurs most frequently in riparian areas along the woodland edge, grasslands with sufficient perch and butcher sites, scrublands, and open-canopied woodlands, although they can be quite common in agricultural and grazing areas. They can sometimes be found in mowed roadsides, cemeteries, and golf courses, although they occur

rarely in heavily urbanized areas. Loggerhead shrike builds nests in stable shrubs or trees requiring dense foliage for well-concealed nests (Appendix C).

California Black Rail- The California black rail (*Laterallus jamaicensis coturniculus*) is designated as threatened in California and primarily occurs in California, Arizona, Baja California, and the Colorado River delta in Sonora. Suitable California black rail habitat generally includes salt marshes, freshwater marshes, and wet meadows. The species is typically identified in conjunction with common threesquare (*Schoenoplectus pungens*), arrowweed (*Pluchea sericea*), Fremont cottonwood (*Populus fremontii*), and seepwillow (*Baccharis salicifolia*). The California black rail typically prey on small (<1-centimeter [0.39-inch]) invertebrates, chiefly insects, gleaned from marsh vegetation and mudflats; they also eat small seeds. No California black rail were detected in the Proposed Project study area during the 2018 biological surveys (Appendix C).

Yuma Ridgway's Rail- The Yuma Ridgway's rail (*Rallus obsoletus yumanensis*) is designated as threatened in California and is federally listed as endangered. The Yuma Ridgway's rail is primarily known to breed in freshwater, but winter in brackish water. The preferred habitat consists of cattails (*Typha* spp.) and bulrushes (*Scirpus* ssp.). The Yuma Ridgway's rail primarily feeds on introduced species of crayfish, small fish, insects, amphibian larvae, clams, and other aquatic invertebrates. No Yuma Ridgway's rail was detected in the Proposed Project study area during the 2018 biological surveys (Appendix C).

Yuma Hispid Cottonrat- The Yuma Hispid cottonrat (*Sigmodon hispidus eremicus*) is listed as a California species of special concern. The species is known to inhabit drainage ditches, canals and seeps vegetated with plants such as arrowweed, salt grass, common reed, screwbean, cattails, sedges, tamarisk, heliotrope, and annual grasses (CDFW, 1998). The project area falls within known habitat for the species. A biological survey was performed by Rincon in 2020 and no Yuma Hispid Cottonrats were discovered.

American Badger- The American badger (*Taxidea taxus*) is an SSC. In California they are found throughout the state except in coastal Northern California. American badger typically occurs in open, sparsely vegetated habitats, but also uses modified habitats such as agriculture. It is found in dry, open areas with friable soils, and can occur throughout the project area. Its distribution in a landscape coincides with the availability of prey, burrowing sites, and mates, with distribution of males ranging wider than distribution of females during the breeding season and summer months. In general, badger activity within a home range tends to

concentrate in areas with suitable soils for burrowing or with colonies of ground squirrels (Appendix C).

Wildlife Movement- Wildlife species generally inhabit suitable habitat patches distributed across a landscape. These habitat blocks, which may make up the species' home range or breeding territory, support most, if not all, of the species' life history needs (e.g., food resource, mates, refuge). Wildlife corridors contribute to population viability by (1) ensuring the continual exchange of genes between populations, which helps maintain genetic diversity; (2) providing access to adjacent habitat areas, representing additional territory for foraging and mating; (3) allowing for a greater carrying capacity; and (4) providing routes for colonization of habitat lands following local population extinctions or habitat recovery from ecological catastrophes (e.g., fires). Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Based on literature review, the Proposed Project study area is located adjacent to, but outside of, any identified regional wildlife movement corridors (Appendix C).

The Proposed Project study area consists of primarily agricultural land, disturbed areas (roads), irrigation canals, drains and small amounts of scrub habitat. Topography across the study area is relatively flat as the site is east of the Peninsular Ranges. While the study area is largely agricultural, it is adjacent to undeveloped BLM land to the east where wildlife can move freely throughout the area. Certain wildlife species, such as coyotes and bobcats, may utilize dirt roads and agricultural areas within the Proposed Project study area to move throughout the area. Constraints to wildlife movement include the Mexican Border wall, SR-98, and the AAC. While these features may constrain wildlife movement, the low traffic volume, along with light human presence, likely does not preclude wildlife from utilizing the site and surrounding areas. While not large areas on site, the riparian and wetland habitats in the Proposed Project study area (e.g., cattail marshes, arrow weed thickets), may serve as foraging or resting habitat for migratory birds and other species traveling through the area.

4.2.1.2 Methodology

Focused surveys were conducted in the original expanded Study Area, totaling approximately 555 acres and a 300-foot corridor buffer along the intake. Special-status biological resources present or potentially present on-site were identified through an extensive literature search outlined in Appendix C. In January 2018, Dudek conducted vegetation mapping, habitat assessments, and a jurisdictional delineation within the project site including a 300-foot buffer around the intake area; this area is collectively referred to as the original Study Area. Additional focused rare plant and flat-tailed horned lizard surveys were conducted in 2020 and 2022, and provide supplemental analysis regarding

effects of the Proposed Project on these resources based on the findings of the focused surveys. All of the original and subsequent focused surveys are outlined in this section.

Vegetation Mapping

Prior to conducting the on-site visit, Dudek reviewed available relevant data on vegetation communities and land covers to determine those resources that were applicable and of appropriate quality for use during the mapping effort. Vegetation community classifications were made directly onto hard copy maps at a 200-scale (1 inch = 200 feet) in the field and were later digitized into the program geodatabase by Dudek biologists. Natural vegetation communities were mapped using the *Manual of California Vegetation* and the *Natural Communities List*. Each natural community was mapped to the association level where possible. Geographic information system (GIS) analysts digitized the delineated vegetation community boundaries from field maps to create a base vegetation layer using ArcGIS. The minimum mapping unit was 1 acre or less for communities that are considered high priority for inventory in the *Natural Communities List* (CDFW 2022). Data was collected for representative vegetation communities and land covers, including aspect, dominant layer, structure of dominant layer, associated species and estimated absolute cover, total vegetative cover of each strata, approximate stand size, disturbance information, other observations, and photographs. Rincon prepared a vegetation communities and land cover map of the alternative intake channel that is now a part of the Project Site (See **Figure 4-2**).

Focused rare plant surveys were conducted in April of 2020 and September of 2022 by Rincon. The focused rare plant surveys were conducted by qualified biologists according to the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (California Department of Fish and Wildlife [CDFW] 2018*), CNPS Botanical Survey Guidelines* (CNPS 2001), *Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities* (CDFG 2009), and *U.S. Fish and Wildlife Service General Rare Plant Survey Guidelines* (Cypher 2002). Surveys involved walking parallel linear transects to achieve 100% visual coverage of the survey area. The plant species encountered during the focused surveys were identified to subspecies or variety, if applicable, to determine sensitivity status (Appendix C). **Figure 4-3** identifies the focused rare plant survey area and mapping within the Project area.

Jurisdictional Delineation

In January 2018, Dudek conducted a formal (routine) jurisdictional wetlands delineation within the Proposed Project study area. All areas within the study area were surveyed on foot for waters of the state, including riparian areas or wetlands under the jurisdiction of USACE pursuant to Section 404 of the CWA, the Regional Water Quality Control Board (RWQCB) pursuant to

Section 402 of the federal CWA, and the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 of the California Fish and Game Code.

Since the RWQCB typically asserts jurisdiction over the same areas as USACE, guidance from USACE documents was used to determine the extent of resources regulated by the RWQCB under the Porter-Cologne Act. Hydrology, vegetation, and soils were assessed, and data were collected on approved USACE forms. The site was evaluated for evidence of an OHWM, surface water, saturation, and wetland vegetation. The extent of any identified jurisdictional areas were determined by mapping the areas with similar vegetation and topography to the sampled locations (Appendix C).

Wildlife

Focused surveys were not conducted for special-status wildlife species by Dudek; however, wildlife species observed or detected during field surveys by sight, calls, tracks, scat, or other signs were recorded. Binoculars (10 mm × 40 mm) were used to aid in the identification of observed wildlife. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. Latin and common names of animals follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU) (2018) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2001) or SDNHM (2002) for butterflies, and Moyle (2002) for fish. All wildlife species observed during the surveys were identified and recorded.

The focused FTHL surveys were conducted by Dudek in accordance with the *Flat-tailed Horned Lizard Interim Survey Protocol* (Flat-tailed Horned Lizard Working Group of Interagency Coordinating Committee 2003) by qualified investigators trained and experienced in surveying for FTHL and their scat. Both walking and road surveys were conducted as required by the protocol. Walking surveys involved 10-meter linear transects to achieve 100% visual coverage of the survey area. Qualified investigators surveyed for both scat and lizards. Road surveys involved driving all roads in or near the Study Area. Qualified investigators drove slowly (no more than 10 miles per hour) to allow detection of lizards. Portions of the survey area which were inaccessible (i.e., private property within the 100-meter buffer around the Study Area) were surveyed with binoculars from the edge of the Study Area. If FTHL were observed, data including date and time observed, 35-mm color photographs, and (if captured) sex and snout-vent length were recorded for each FTHL observed. Surveys were conducted in 2020 between April and September when surface temperatures were between 95 to 122 degrees Fahrenheit. Surveys were not conducted for at least 12 days following heavy rains, hailstorms or strong winds (see Appendix C).

4.2.2 Relevant Plans, Policies, and Ordinances

Federal

Federal Endangered Species Act

The federal Endangered Species Act (ESA) of 1973 designates threatened and endangered animals and plant species and provides measures for their protection and recovery. Under the ESA, "take" of listed animal and plant species in areas under federal jurisdiction is prohibited without obtaining a federal permit. The ESA defines "take" as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct" (16 USC 1531). Harm includes any act that actually kills or injures fish or wildlife, including significant habitat modification or degradation that significantly impairs essential behavioral patterns of fish or wildlife. Activities that damage (i.e., harm) the habitat of listed wildlife species require approval from USFWS for terrestrial species. If critical habitat has been designated under the ESA for listed species, impacts to areas that contain the primary constituent elements identified for the species, whether or not it is currently present, is also prohibited without obtaining a federal permit. ESA Sections 7 and 10 provide two pathways for obtaining permission to take listed species.

Under Section 7 of the ESA, a federal agency that authorizes, funds, or carries out a project that "may affect" a listed species or its critical habitat must consult with USFWS. For example, USACE must issue a permit for projects impacting waters or wetlands under USACE jurisdiction. In a Section 7 consultation, the lead agency (e.g., USACE) prepares a biological assessment that analyzes whether the project is likely to adversely affect listed wildlife or plant species or their critical habitat, and it proposes suitable avoidance, minimization, or compensatory mitigation measures. If the action would adversely affect the species, USFWS has up to 135 days to complete the consultation process and develop a biological opinion determining whether the project is likely to jeopardize the continued existing species or result in adverse modification of critical habitat. If a "no jeopardy" opinion is provided, "the action agency may proceed with the action as proposed, provided no incidental take is anticipated. If incidental take is anticipated, the agency or the applicant must comply with the reasonable and prudent measures and implementing terms and conditions in the USFWS's incidental take statement to avoid potential liability for any incidental take" (USFWS 1998). If a jeopardy or adverse modification opinion is provided, USFWS may suggest "reasonable and prudent alternatives for eliminating the jeopardy or adverse modification of critical habitat in the opinion" or "choose to take other action if it believes, after a review of the biological opinion and the best available scientific information, such action satisfies section 7(a)(2)" (USFWS 1998).

Under Section 10 of the ESA, private parties with no federal nexus may obtain an Incidental Take Permit (ITP) to harm listed wildlife species incidental to the lawful operation of a project. To obtain

an ITP, the applicant must develop a habitat conservation plan that specifies impacts to listed species, provides minimization and mitigation measures and funding, and discusses alternatives considered and the reasons why such alternatives are not being used. If USFWS finds that the habitat conservation plan would not appreciably reduce the likelihood of the survival and recovery of the species, it would issue an ITP. Issuance of ITPs requires USFWS to conduct an internal Section 7 consultation, thus triggering coverage of any listed plant species or critical habitat present on site (thus, listed plants on private property are protected under the ESA if a listed animal is present). Unlike a Section 7 consultation, USFWS is not constrained by a time limit to issue an ITP.

Clean Water Act

The CWA is intended to restore and maintain the quality and biological integrity of the nation's waters. Section 402 of the CWA prohibits the discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The CWA, Section 402, requires an NPDES Permit for the discharge of stormwater from municipal separate storm sewer systems serving urban areas with a population greater than 100,000, construction sites that disturb 1 acre or more, and industrial facilities. The RWQCB administers these permits with oversight provided by the SWRCB and EPA Region IX.

Section 404 of the CWA authorizes the Secretary of the Army, acting through USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites." CWA Section 502 further defines "navigable waters" as "waters of the United States, including territorial seas." Waters of the United States are broadly defined in the Code of Federal Regulations (CFR), Title 33, Section 328.3, Subdivision (a) to include navigable waters; perennial and intermittent streams, lakes, rivers, and ponds; and wetlands, marshes, and wet meadows.

The lateral limits of USACE's CWA Section 404 jurisdiction in non-tidal waters are defined by the ordinary high water mark, unless adjacent wetlands are present. The ordinary high water mark is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or presence of debris (33 CFR 328.3). As a result, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within or adjacent to waters of the United States, the lateral limits of USACE's jurisdiction extends beyond the ordinary high water mark to the outer edge of the wetland.

Section 401 of the CWA requires that an applicant for a federal license or permit to discharge into navigable waters provide the federal agency with a water quality certification declaring that the discharge would comply with water quality standard requirements of the CWA. USACE is

prohibited from issuing a CWA permit until the applicant receives a CWA Section 401 water quality certification or waiver from the RWQCB.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (16 USC 661–666) "authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with Federal and State agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife." The term "wildlife" includes both animals and plants. For any federal project where the waters of any stream or other body of water are impounded, diverted, deepened, or otherwise modified, consultation with the USFWS and appropriate state wildlife agency is undertaken to prevent the loss of and damage to wildlife resources. These agencies prepare reports and recommendations that document project effects on wildlife and identify measures that may be adopted to prevent loss or damage to wildlife resources. Provisions of the act are implemented through the Section 404 permit process.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA)was enacted in 1918 to protect native migratory birds or any part, nest, or egg of such bird unless allowed by another regulation adopted in accordance with the act. Enforced in the United States by USFWS, the MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21; 16 USC 703–712). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) may be considered a "take" and is potentially punishable by fines and/or imprisonment.

State

California Endangered Species Act

CDFW administers the California ESA (California Fish and Game Code, Section 2050 et seq.), which prohibits the take of plant and animal species designated by the Fish and Game Commission as endangered or threatened in California. Under the California ESA, Section 86, take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." California ESA Section 2053 stipulates that state agencies may not approve projects that would "jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy."

California ESA Sections 2080 through 2085 address the taking of threatened, endangered, or candidate species by stating, "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided in this chapter, the Native Plant Protection Act (California Fish and Game Code, Sections 1900–1913), or the California Desert Native Plants Act (Food and Agricultural Code, Section 80001)."

California Environmental Quality Act

CEQA was enacted in 1970 to provide for full disclosure of environmental impacts to the public before issuance of a discretionary permit any by state or local public agency. Projects subject to CEQA include zoning ordinances, issuance of conditional use permits, variances, and the approval of tentative subdivision maps. If a project is regulated under CEQA, the proponent completes necessary studies and designs for the project and identifies the state lead agency for the project. The lead agency conducts an initial study that identifies the environmental impacts of the project and determines whether these impacts are significant. In some cases, the lead agency may skip the preparation of the initial study and proceed directly to the preparation of an EIR. The lead agency may prepare a negative declaration if it finds no potential significant impacts; a mitigated negative declaration if it revises or conditions the project to avoid or mitigate potential significant impacts; or an EIR if it finds potential significant, unmitigated impacts. The EIR is subject to a more extensive public participation process, and provides information on potential significant impacts of the project, lists ways to minimize these impacts, and discusses alternatives to the project. CEQA provides a public review process, and projects with significant impacts may be approved if the lead agency makes a finding of overriding considerations.

In addition to state-listed or federally listed species, special-status plants and animals receive consideration under CEQA. Special-status species include wildlife Species of Special Concern listed by CDFW and plant species with a California Rare Plant Rank (CRPR) of 1A, 1B, or 2.

California Fish and Game Code

Birds and Mammals - According to Sections 3511 and 4700 of the California Fish and Game Code, which regulate birds and mammals, respectively, a fully protected species may not be taken or possessed, and incidental take of these species is not authorized. However, CDFW may authorize the taking of species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species pursuant to a permit for the protection of livestock. Fully protected species include California condor (*Gymnogyps californianus*), Peninsular bighorn sheep (*Ovis canadensis*

cremnobates), ringtail (*Bassariscus astutus*), and golden eagle (*Aquila chrysaetos*). In 2012, legislation (Senate Bill 618) took effect that grants potential take of fully protected species that are included in a natural community conservation plan.

Resident and Migratory Birds - The California Fish and Game Code provides protection for wildlife species. It states that no mammals, birds, reptiles, amphibians, or fish species listed as fully protected can be "taken or possessed at any time." In addition, CDFW affords protection over the destruction of nests or eggs of native bird species (Section 3503), and it states that no birds in the orders of Falconiformes or Strigiformes (birds of prey) can be taken, possessed, or destroyed (Section 3503.5). CDFW cannot issue permits or licenses that authorize the take of any fully protected species, except under certain circumstances such as scientific research and live capture and relocation of such species pursuant to a permit for the protection of livestock (Section 3511). Separate from federal and state designations of species, CDFW designates certain vertebrate species as Species of Special Concern based on declining population levels, limited ranges, and/or continuing threats that have made them vulnerable to extinction.

California Native Plant Protection Act

The Native Plant Protection Act of 1977 (California Fish and Game Code, Section 1900 et seq.) directed CDFW to carry out the legislature's intent to "preserve, protect and enhance rare and endangered plants in this State." The Native Plant Protection Act gave the California Fish and Game Commission the power to designate native plants as "endangered" or "rare," and to protect endangered and rare plants from take. When the California ESA was passed in 1984, it expanded on the original Native Plant Protection Act, enhanced legal protection for plants, and created the categories of "threatened" and "endangered" species to parallel the federal ESA. The California ESA categorized all rare animals as threatened species under the act, but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The Native Plant Protection Act remains part of the California Fish and Game Code, and mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and a project proponent.

Streambed Alteration Agreements

CDFW must be notified prior to beginning any activity that would obstruct or divert the natural flow of, use material from, or deposit or dispose of material into a river, stream, or lake, whether permanent, intermittent, or ephemeral water bodies, under Section 1602 of the California Fish and Game Code. CDFW has 30 days to review the proposed actions and propose measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Streambed Alteration Agreement. The conditions of a Streambed Alteration Agreement and a CWA Section 404 permit often overlap.

Porter-Cologne Water Quality Control Act

The intent of the Porter-Cologne Act (California Water Code, Section 13000 et seq.) is to protect water quality and the beneficial uses of water, and it applies to both surface water and groundwater. Under this law, the State Water Resources Control Board develops statewide water quality plans, and the RWQCB develops basin plans that identify beneficial uses, water quality objectives, and implementation plans. The RWQCBs have the primary responsibility to implement the provisions of both statewide and basin plans. Waters regulated under the Porter-Cologne Act include isolated waters that are no longer regulated by USACE. Developments with impact to jurisdictional waters must demonstrate compliance with the goals of the act by developing stormwater pollution prevention plans, standard urban stormwater mitigation plans, and other measures to obtain a CWA Section 401 certification.

Local

Imperial County General Plan

The Imperial County General Plan Conservation and Open Space Element establishes goals and objectives, together with implementation programs and policies related to the protection of threatened or endangered plant and wildlife species and cooperation with federal, state, and local agencies.

IID Natural Community Conservation Plan

IID is currently implementing the Final EIR/EIS for the Quantification Settlement Agreement Water Transfers, including the In-Valley Biological Opinion, In-Valley CESA Incidental Take Permit, and Draft Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP). Since these plans are still awaiting approval, the Proposed Project is not subject to the IID's NCCP/HCP.

Desert Renewable Energy Conservation Plan

BLM has adopted the Desert Renewable Energy Conservation Plan (DRECP), which provides protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. The Draft DRECP was originally developed as an HCP/NCCP and a BLM Land Use Plan Amendment covering both public and private lands across seven counties, including Imperial County. In October 2015, the DRECP BLM Land Use Plan Amendment and Final EIS, which addresses renewable energy, land use, and conservation on BLM lands only, was released (BLM 2015). Although the DRECP plan area includes the project area, the DRECP currently only applies to renewable energy projects.

4.2.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to biological resources would occur 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 Game 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 Game 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.

4.2.4 Impacts Analysis

Various impact types are referenced throughout the analysis herein. The definitions of the various impact types are outlined below, and in Appendix C.

Construction-Related (Short-Term Temporary) Direct Impacts: Absent the recommended mitigation measures, potential construction-related direct impacts to biological resources could result from unintentional clearing, trampling, or grading outside of the proposed construction zone. Accidental clearing, trampling, or grading outside designated construction zones may occur during construction activities for various reasons, such as incorrect construction grading plans, human error in interpreting grading plans, human error or accidents in operating construction equipment, and misunderstandings by construction personnel in adhering to construction plan requirements, including avoidance of biological resources. Temporary ground-disturbing activities would occur

from the Proposed Project. Temporary impacts may occur within a 300-foot buffer from the intake channel to allow for activities like vehicles passing, laydown, and staging. Staging areas during construction would be located within existing disturbed areas to the maximum extent feasible, including existing dirt roads and disturbed areas. Additionally, the permanent loss of or harm to individual special-status plant and wildlife species from construction-related activities is addressed as a construction-related direct impact.

Construction-Related (Short-Term Temporary) Indirect Impacts: For the Proposed Project, the construction-related (short-term temporary) impacts would primarily be indirect and include temporary effects that are immediately related to construction, such as the generation of construction-related dust or noise.

Operations-Related (Long-Term Permanent) Direct Impacts: Operations-related (long-term) direct impacts are permanent impacts that result in the direct loss of biological resources due to a project (e.g., the permanent loss of wildlife habitat or the permanent loss of or harm to individual special-status plant and wildlife species from operations and maintenance). Permanent ground-disturbing activities would occur from the construction of the reservoir, automated gate outlet, and intake channel.

Operations-Related (Long-Term Permanent) Indirect Impacts: Operations-related (long-term permanent) indirect impacts could result from the proximity to biological resources after construction. Operations-related (long-term permanent) indirect impacts from the Proposed Project are expected to be minimal. Examples of operations-related (long-term permanent) to biological resources could include impacts such as dust from maintenance vehicles, human presence, vehicle collision, and noise.

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?

Special- Status Plants

Construction (Short-Term) Impacts and Operations Impacts

Direct & Indirect

No Impact. Although suitable habitat for special-status does occur on limited areas of the Project Site, no special-status plants were identified during the Proposed Project Study Area survey for special-status plants in August 2017. There were also no special status plants observed in subsequent Project site focused rare plant surveys completed in April 2020 and September of 2022 by Rincon, therefore no impacts to special-status plants would occur as a result of the Project.

Special-Status Wildlife

As described in Section 4.2.1, Existing Conditions, several special-status wildlife species have been observed or have at least a moderate potential to occur in the Proposed Project study area, or close proximity, during some or all seasons. These include the FTHL, CDFT, burrowing owl, Southern California rufous-crowned sparrow, Southwestern willow flycatcher, ferruginous hawk, northern harrier, prairie falcon, loggerhead shrike, California black rail, Yuma Ridgway's rail, Desert Tortoise and American badger. California black rail and Yuma Ridgway's rail were not observed during the 2018 site visits and suitable habitat is known to be closer to the AAC. Therefore, no impacts to rail are anticipated. Although no FTHL/CDFT or scat were observed during a focused survey conducted in May 2020 by Rincon, mitigation is recommended out of an abundance of caution. Potential impacts to special-status wildlife are discussed under both short-term and long-term impacts.

Construction (Short-Term) Impacts

Direct & Indirect

Less-Than-Significant Impact with Mitigation. Two types of short-term direct impacts can potentially occur to special-status wildlife species: impacts to habitat and impacts to the species from injury or mortality of individuals of the species. Absent the proposed mitigation measures, impacts causing injury or mortality of individuals could include, for example, crushing of low-mobility species during grading, entombment of burrowing species during grading, collisions with construction equipment, and destruction of bird nests during vegetation removal or grading.

Short-term direct impacts to individuals would be reduced through mitigation measures **MM-BIO-1 (General Avoidance and Minimization Measures)**, which would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads; and **MM-BIO-2 (Environmental Awareness Training, Biological Monitoring, and Compliance)**, which would require the project biologist to conduct a WEAP for all construction/contractor personnel and would require ongoing biological construction monitoring to ensure compliance with mitigation measures; and **MM-BIO-3 (Burrowing Owl Surveys and Avoidance/Relocation)**.

Burrowing Owl

One burrowing owl was observed during the January 29, 2018, site visit and suitable habitat occurs in the Proposed Project study area. Although focused surveys were not conducted within the Proposed Project study area, burrowing owls are presumed to be present. Absent the recommended mitigation measures, potential construction-related direct impacts to burrowing owl could result from unintentional clearing, trampling, or grading outside of the construction zone. Also, temporary ground-disturbing activities, such as grading, trenching and staging areas, would occur

from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. Short-term direct impacts to habitat would be significant absent mitigation. Additionally, ground disturbances could potentially result in destruction of burrowing owl dens, destruction of nests, eggs, and young, and entombment of adults. Burrowing owl is a SSC that has experienced declines in California and loss of individuals and destruction of nests is considered a significant impact.

Construction mitigation measure **MM-BIO-3 Burrowing Owl Surveys and Avoidance/Relocation** (burrowing owl pre-construction surveys and avoidance/relocation plan) would result in identification of any burrowing owls within areas potentially impacted by the project, establishment of appropriate buffers, and avoidance of impacts to burrowing owl. **MM-BIO-1** would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to burrowing owls. Construction-related direct impacts to burrowing owl would be less than significant with incorporation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-3**.

Southern California Rufous-Crowned Sparrow and Ferruginous Hawk

Southern California rufous-crowned sparrow was observed in the northeast corner of the Proposed Project study area in bush seepweed scrub during the January 29, 2018, site visit. The study area is outside of its normal range, and this occurrence is likely a migrant or wintering individual. Ferruginous hawk was not observed, but has potential to forage during the winter when it occurs in this region. Absent the recommended mitigation measures, potential construction-related direct impacts to suitable habitat could result from unintentional clearing, trampling, or grading outside of the Proposed Project impact area during construction. Also, temporary ground-disturbing activities, such as grading, trenching and staging areas, would occur from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. These impacts could result in temporary loss of habitat and permanent alteration of habitat for these species. Short-term direct impacts to habitat would be significant absent mitigation. **MM-BIO-1** would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to suitable habitat. Construction-related direct impacts to suitable habitat would be less than significant with incorporation of **MM-BIO-1** and **MM-BIO-2**.

Northern Harrier

Northern harrier was observed foraging over the agricultural areas in the Proposed Project study area during the January 29, 2018, site visit. Northern harrier does not nest in this region, but it does occur in the winter. Absent the recommended mitigation measures, potential construction-related direct impacts to suitable habitat could result from unintentional clearing, trampling, or grading outside of the Proposed Project impact area during construction. Also, temporary ground-disturbing activities, such as grading,

trenching and staging areas, would occur from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. These impacts could result in temporary loss of habitat and permanent alteration of habitat for these species. Short-term direct impacts to habitat would be significant absent mitigation. **MM-BIO-1** would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to suitable habitat. Construction-related direct impacts to suitable habitat would be less than significant with incorporation of **MM-BIO-1** and **MM-BIO-2**.

Prairie Falcon and Loggerhead Shrike

Prairie falcon was observed foraging over the agricultural areas in the Proposed Project study area during the January 29, 2018, site visit; however, there is no suitable nesting habitat on site. Loggerhead shrike was observed perched on power lines within and adjacent to the study area on January 29, 2018. There is some suitable nesting habitat within the scrub habitat in the study area. Absent the recommended mitigation measures, potential construction-related direct impacts to suitable habitat and/or nests (loggerhead shrike) could result from unintentional clearing, trampling, or grading outside of the Proposed Project impact area during construction. Also, temporary ground-disturbing activities, such as grading, trenching and staging areas, would occur from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. These impacts could result in temporary loss of habitat, permanent alteration of habitat for these species, and impacts to active nests. Short-term direct impacts to habitat would be significant absent mitigation. Construction mitigation measure **MM-BIO-4** (**Nesting Bird Pre-construction Surveys and Avoidance Plan.**) would result in identification of any active nests within areas potentially impacted by the project, establishment of appropriate buffers, and avoidance of impacts to loggerhead shrike nests. **MM-BIO-1** would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to suitable habitat. Construction-related direct impacts to suitable habitat and/or active nests would be less than significant with incorporation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-4**.

American Badger

No badgers or badger burrows were observed during the 2018 site visits, but there are some historical occurrences in the El Centro area west of the project site (CDFW 2018). Absent the recommended mitigation measures, potential construction-related direct impacts to American badger could result from unintentional clearing, trampling, or grading outside of the Proposed Project impact area during construction. Also, temporary ground-disturbing activities, such as grading, trenching and staging areas, would occur from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. These impacts could result in temporary loss of American badger habitat, permanent alteration of habitat, and crushing of badgers, either

aboveground or in burrows. Short-term direct impacts to habitat would be significant absent mitigation. **MM-BIO-1** (general construction-related avoidance and minimization measures) would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to American badger or their suitable habitat. Construction-related direct impacts to American badger and/or suitable habitat would be less than significant with incorporation of **MM-BIO-1** and **MM-BIO-2**.

Desert Tortoise

Desert Tortoises were not observed during the 2018 site visits, and the study area does not have suitable habitat. However, the project area does occur in the Desert Tortoise range (CDFW 2018). Absent the recommended mitigation measures, potential construction-related direct impacts to desert tortoises could result from unintentional clearing, trampling, or grading outside of the Proposed Project impact area during construction. Also, temporary ground-disturbing activities, such as grading, trenching and staging areas, would occur from the Proposed Project; the acreages for temporary impacts are estimated in Table 4.2-1. **MM-BIO-1** (general construction-related avoidance and minimization measures) would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2** would further ensure avoidance of impacts to the desert tortoise. Out of an abundance of caution **MM-BIO-5** would prevent construction related impacts. With incorporation of **MM-BIO-1**, **MM-BIO-2, and MM-BIO-5** any potential impacts to the Desert Tortoise would be less than significant.

Flat-tailed horned lizard and Colorado Desert fringe-toed lizard

The FTHL was not present during any of the focused surveys. Focused surveys were not conducted for the CDFTL, but they were not observed during the FTHL focused surveys. Although FTHL have been found within two miles of the Project site, the habitat is not continuous or suitable between the locality and Project site. However, protocol surveys are being implemented out of an abundance of caution under **MM-BIO-6**. Direct impacts could include temporary or permanent injury or mortality of individuals and indirect impacts could include generation of fugitive dust, noise and vibration, increased human presence, accidental release of chemical pollutants. Additionally, these low-mobility species would likely not be able to escape construction activity to occupy suitable adjacent habitats and therefore would be particularly susceptible to injury and mortality.

MM-BIO-1 (general construction-related avoidance and minimization measures) would limit vehicles and construction equipment to identified impact areas and would limit ingress and egress to established roads. **MM-BIO-2 and MM-BIO-6** would further ensure avoidance of impacts to

the lizards. Potential impacts would be less than significant with incorporation of **MM-BIO-1**, **MM-BIO-2, and MM-BIO-6**.

Operations (Long-Term) Impacts

Direct

Less-Than-Significant Impact. Long-term direct impacts to special-status wildlife species, as with short-term direct impacts, include habitat impacts and impacts resulting in injury or mortality of individuals. Habitat impacts are permanent impacts from loss of vegetation communities and land covers. Long-term direct impacts from injury or mortality of individuals include impacts occurring from activities related to operations and maintenance. For example, occasional road grading could result in crushing of low-mobility wildlife species occurring along the existing road or entombment of burrowing species in previously disturbed areas (although some of the burrowing species occurring in the project area avoid such areas).

Burrowing Owl

Burrowing owl was observed during the 2018 site visit. Focused surveys were not conducted within the Proposed Project study area to determine the number of individuals; therefore, impacts are based upon the presence of suitable habitat and the potential for the species to occur. Permanent direct impacts from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. Burrowing owls can occur in some portions of the agriculture land; however, these areas are currently subject to regular disturbance and therefore, are not considered to be suitable over the entire area. Permanent impacts to primarily agriculture lands are not considered a significant impact.

Southern California Rufous-Crowned Sparrow and Ferruginous Hawk

Southern California rufous-crowned sparrow was observed during the 2018 site visit; however, the Proposed Project study area is located outside of the species' yearlong range. It is assumed the species may have been wintering or migrating through the site. Ferruginous hawk was not recorded during the 2018 site visits; however, suitable habitat occurs in the Proposed Project study area. Permanent direct impacts from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. However, due to the small size of the permanent impacts to native habitat, these impacts are not considered a significant impact.

Northern Harrier

Northern harrier was recorded foraging during the 2018 site visits; however, the species is unlikely to nest on site because the Proposed Project study area is located outside of its known nesting range (Smith et al. 2011). Permanent direct impacts from construction of the reservoir, roads, and intake

channel are estimated in Table 4.2-1. However, due to the small size of the permanent impacts to native habitat, these impacts are not considered a significant impact.

Prairie Falcon and Loggerhead Shrike

Prairie falcon and loggerhead shrike were both observed within the Proposed Project study area during the 2018 site visits. Permanent direct impacts from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. However, due to the small size of the permanent impacts to native habitat, these impacts are not considered a significant impact.

American Badger

This species has a moderate potential to occur in or adjacent to the Proposed Project study area. Permanent direct impacts from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. However, due to the small size of the permanent impacts to native habitat, these impacts are not considered a significant impact.

Desert Tortoise

This species has a moderate potential to occur in or adjacent to the Proposed Project study area. Permanent direct impacts from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. However, the current Project site is heavily disturbed and does not contain any suitable habitat for the Desert Tortoise, thus impacts are not considered a significant impact.

Flat-tailed horned lizard and Colorado Desert fringe-toed lizard

There is no suitable habitat for FTHL and CDFTL within the proposed Project area. Permanent direct impacts to these species from construction of the reservoir, roads, and intake channel are estimated in Table 4.2-1. However, due to the small size and spread out locations of the permanent impacts, permanent impacts to the lizards are not considered a significant impact.

Indirect

Less-Than-Significant Impact. Long-term indirect impacts to special-status wildlife species include impacts that could occur after construction is completed during operations and maintenance. These impacts occur when operations and maintenance activities occur within or adjacent to habitat occupied by special-status wildlife species. The primary potential long-term indirect impacts to special-status wildlife species from the Proposed Project are long-term habitat degradation from temporary impacts, vehicle collisions, and increased human presence. Habitat degradation can occur because the introduction of non-native plant species affects aspects of habitat structure and food resources that are essential to some species. Vehicle collisions have the

potential to occur along access roads. Although vehicle traffic is expected to be low, the presence of moving vehicles on roads through occupied habitat could pose a hazard to low and moderate mobility mammals and reptiles and even to some birds. Absent mitigation measures, these impacts would be significant. Due to the limited operations and maintenance (every 30 days or as-needed routine inspections), human presence during operations and maintenance activities is not anticipated to disrupt breeding, nesting, and foraging behaviors and not considered a significant impact.

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?

Sensitive Vegetation Communities

Special-status or sensitive vegetation communities in the Proposed Project study area include 0.15 acres of arrow weed thickets. Impacts to these communities are described in this subsection.

State-Jurisdictional Waters

As discussed in Section 4.2.1, there are jurisdictional wetlands and waters occur within the Proposed Project site. Impacts to these resources are described below.

Construction (Short-Term) Impacts

Direct

Less-Than-Significant Impact with Mitigation. Sensitive vegetation communities in the Proposed Project site area include 0.15 acres of arrow weed thickets. The Proposed Project would permanently impact this sensitive vegetation community: 0.15 acres of arrow weed thickets. These impacts would be significant impacts.

The Proposed Project would temporarily impact approximately 0.66 acres of RWQCB wetlands. There are additional vegetation communities that may be subject to regulation by RWQCB and/or CDFW. Impacts to jurisdictional resources would be significant.

Construction mitigation measures **MM-BIO-1** and **MM-BIO-2** would apply. These measures would avoid and minimize direct impacts to vegetation communities and jurisdictional waters/wetlands because they require the project biologist to conduct a WEAP for all construction/contractor personnel to ensure compliance with the mitigation measures and they require ongoing biological construction monitoring. This includes demarcation of the construction area using highly visible materials in the field that minimize unintentional impacts to vegetation

communities and jurisdictional waters/wetlands outside the designated construction area. Training and ongoing monitoring would aid in enforcing the requirements that construction must be restricted to designated areas and vegetation communities and jurisdictional waters/wetlands outside the designated construction zone would be avoided. **MM-BIO-7** (**Coordination of Jurisdictional State Permits**) requires the applicant to obtain the necessary permits from the RWQCB for impacts to jurisdictional resources. **MM-BIO-8 Restoration of Riparian and Wetland Communities** will restore the permanent impacts at a 1:1 ration. Additionally, **MM-AQ-1 and MM-AQ-2** (preparation and implementation of an enhanced dust control plan) would minimize the effects of dust during construction by implementing a dust control plan, which would require that construction-related dust is suppressed in compliance with the ICAPCD requirements.

Construction-related direct impacts to sensitive vegetation communities and jurisdictional waters/wetlands would be less than significant with incorporation of **MM-BIO-1**, **MM-BIO-2**, and **MM-BIO-7**, **MM-BIO-8,** and **MM-AQ-1** and **MM-AQ-2**.

Indirect

Less-Than-Significant Impact with Mitigation. Short-term construction-related indirect impacts to sensitive vegetation communities include impacts from the generation of fugitive dust; the release of chemical pollutants; and the adverse effect of invasive plant species. Potential short-term or temporary indirect impacts to sensitive vegetation communities are considered significant absent mitigation.

The project is required to comply with all applicable regulations that protect waters of the state. The Proposed Project is required to comply with the NPDES State Water Resources Control Board Construction General Permit Order No. 2009-0009-DWQ, which includes a SWPPP, BMPs for construction waste handling and disposal, and a Monitoring Program and Reporting Requirements. Compliance with the regulations of the NPDES General Permit, local grading ordinances, as well as the federal CWA Title 33, would reduce stormwater runoff and water quality impacts to acceptable levels. Therefore, indirect construction impacts associated with water quality standards and degradation would be less than significant.

MM-BIO-1 requires that vehicles and equipment will be limited to maintenance access roads and the minimal area necessary to perform the work to minimize chemical releases and trampling of vegetation and soils compaction by humans and **MM-BIO-2** ensures avoidance of areas outside of the construction area. These potential long-term indirect impacts to special-status plants would be less than significant with implementation of **MM-BIO-1** and **MM-BIO-2**.

Operations (Long-Term) Impacts

Direct

Less-Than-Significant Impact with Mitigation. Permanent direct impacts from construction of the Proposed Project will permanently impact a sensitive vegetation community: 0.15 acres of arrow weed thickets (Table 4.2-1). These impacts would be significant.

The Proposed Project will permanently impact approximately 0.66 acres of RWQCB wetlands (Table 4.2-2). There are additional vegetation communities that may be subject to regulation by the RWQCB, and/or CDFW. Impacts to jurisdictional resources would be a significant impact.

Operations of the Proposed Project would not result in significant water quality impacts as the proposed intake channel would be concrete-lined, reducing the amount of erosion and sedimentation of the water passing through. In addition, the Proposed Project would not increase or decrease the amount of agricultural water diverted from the AAC Reach, since the proposed reservoir serves as temporary storage to support water conservation and management efforts. The Proposed Project would not substantially affect water quality or irrigation water quantity.

Long-term direct impacts to loss of vegetation communities and jurisdictional waters/wetlands would be mitigated through **MM-BIO-8**, to implement restoration and enhancement within nearby disturbed areas. The applicant will obtain the necessary permits from the RWQCB for impacts to jurisdictional resources. Permanent direct impacts to vegetation communities and jurisdictional waters/wetlands would be less than significant with incorporation of **MM-BIO-7**.

Indirect

Potential long-term construction-related indirect impacts to vegetation communities and jurisdictional waters/wetlands include the potential for chemical releases such as oils and grease from vehicles that could degrade habitat; increased invasive plant species that may degrade habitat; and trampling of vegetation and soil compaction by humans, which could affect soil moisture, water penetration, surface flows, and erosion. Since the reservoir is an unmanned facility, operation impacts would be less than significant with incorporation of **MM-BIO-1** which requires that vehicles and equipment be limited to maintenance access roads and the minimal area necessary to perform the work to minimize chemical releases and trampling of vegetation and soils compaction by humans.

Operations of the Proposed Project would not result in significant water quality impacts as the proposed intake channel would be concrete-lined, reducing the amount of erosion and sedimentation of the water passing through.

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?

Less-than-Significant Impact. As discussed in Section 4.2.1, the Proposed Project area does not contain waters subject to federal jurisdiction under Section 404 of the CWA but is tied to the AAC Reach (the AAC is under the jurisdiction of the USACE); however, the Proposed Project has been issued a "No Permit Required" by USACE given that the proposed project is an exempt activity pursuant to 33 CFR 323.4 (a)(1)(i). A Section 404 permit would not need to be obtained by IID.

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?

Construction (Short-Term) Impacts

Less-Than-Significant Impact. Construction within the Proposed Project area could have both a direct and indirect impact on wildlife movement. Wildlife may be deterred from the construction area due to increased human presence, loud noises, and physical disruptions of habitat. However, construction will be temporary at any location, and wildlife would be able to use staging areas and temporary construction areas freely after work crews are gone. Typical construction methods would not impede wildlife movement over a large area at any one time. Therefore, short-term impacts to movement of native wildlife species and from impediments to use of native wildlife nursery sites would be less than significant.

Operations (Long-Term) Impacts

Less-Than-Significant Impact. The Proposed Project area is not located within a regional wildlife movement corridor or linkage planning area as identified in *A Linkage Network for the California Deserts* (Penrod et al. 2012). The Proposed Project area is located within an open landscape where wildlife can freely move within and throughout with little impediment. Therefore, the Project would not result in long-term impacts to wildlife movement through the area.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less-Than-Significant Impact. The Imperial County General Plan Conservation and Open Space Element establishes goals and objectives, together with implementation programs and policies related to the protection of threatened or endangered plant and wildlife species and cooperation with federal, state, and local agencies. The project is consistent with the Imperial County General Plan biological resource policies. Table 4.2-4 includes County goals and objectives related to the conservation of biological

resources, and Table 4.2-5 includes the program measures related to biological resources and describes how the project is consistent with the general plan.

Table 4.2-4
Imperial County General Plan Goals and Objectives

Conservation of Biological Resources Goals and Objectives
Objective 2.1: Designate critical habitats for Federally and State-listed species.
Objective 2.2: Develop management programs, including preservation of habitat for FTHL, desert pupfish, and burrowing owl.
Objective 2.3: Support investigation of long-term climate change effects on biological resources.
Objective 2.4: Use the CEQA and NEPA process to identify, conserve and restore sensitive vegetation and wildlife resources.
Objective 2.5: Give conservation of sensitive species and habitat a high priority in County park acquisition and development programs.
Objective 2.6: Attempt to identify, reduce, and eliminate all forms of pollution; including air, noise, soil, and water.

Table 4.2-5
Imperial County General Plan Consistency Analysis

General Plan Policies and Implementation Measures	Consistency	Analysis
Implementing Programs and Policies		
Policy 1. Provide a framework for the conservation and enhancement of natural and created open space which provides habitat values.	Yes, with mitigation	**MM-BIO-1** through **MM-BIO-8** would reduce impacts to special-status species, sensitive vegetation communities, and jurisdictional resources to a less-than-significant level. The Proposed Project would be in compliance with federal and state laws.
1a. Identify Resource Areas to conserve and enhance native vegetation and wildlife. These areas include agency designated sensitive habitats with USFWS, BLM Areas of Critical Environmental Concern (ACECs), and CDFW. These designated lands are designed for the protection and perpetuation of rare, endangered, and threatened species and areas important for scientific study.	Yes, with mitigation	**MM-BIO-8** would reduce impacts to sensitive vegetation communities designated by CDFW's Natural Communities List (CDFG 2010).
1b. Projects within or in the vicinity of a Resource Area should be designed to minimize adverse impacts on the biological resources it was created to protect.	Yes, with mitigation.	**MM-BIO-1** through **MM-BIO-8** would reduce impacts to special-status species, sensitive vegetation communities, and jurisdictional resources to a less-than-significant level. The Proposed Project would be in compliance with federal and state laws.
1c. Accept donations of land which have high wildlife value. Where appropriate, Imperial County shall attempt to exchange donated lands of high wildlife value with other State, Federal, or other resource agencies equipped to protect and manage such lands for other lands more appropriate to County needs.	N/A	No land would be exchanged or donated as part of the Proposed Project.

1d. Develop an environmental mitigation program that protects, and restores Salton Sea wildlife habitats as offsets to biological disturbances identified through the CEQA review process for development projects. The program would allow the County and/or Salton Sea JPA to restore habitat through financing mechanisms including land banks and/or direct financial contributions from the developers to mitigate their impacts	N/A	MM-BIO-1 thorugh MM-BIO-8 would reduce Impacts to wildlife species and their habitat to a less-than-significant level.
1e. Conserve the native habitat of sensitive plants and animals through the dedication of open space easements, or other means that will ensure their long-term protection and survival. Such easements may preclude the erecting of any structures (temporary or permanent), vegetation removal, or any other activities. These dedicated open space easements would also serve to reduce potential indirect impacts to sensitive biological resources that may result from human activities associated with future developments	Yes	**MM-BIO-8** would restore and enhance sensitive vegetation communities at a 1:1 ratio within close proximity to the Project site.
1f. Areas designated for biological open space conservation shall include buffers, which provide important breeding and foraging habitats for native and migratory birds and animals. Such buffers shall serve to separate future development from adjacent native habitat areas to ensure the perpetual regeneration of these habitats	N/A	The impacts to sensitive vegetation communities would be mitigated at a 1:1 ratio (**MM-BIO-8**); therefore, habitat for birds and animals would be maintained.
1g. Protect riparian habitat and other types of wetlands from loss or modification by dedicating open space easements with adequate buffer zones, and by other means to avoid impacts from adjacent land uses. Road crossings or other disturbances of riparian habitat should be minimized and only allowed when alternatives have been considered and determined infeasible.	Yes, with mitigation	**MM-BIO-8** would reduce impacts to sensitive vegetation communities designated by CDFW's Natural Communities List (CDFG 2010) and riparian areas subject to regulation by CDFW and/or RWQCB.
1h. Rock outcrops which serve as significant boulder habitat for sensitive biological resources should be considered within open space easements.	N/A	There are no rock outcrops within the Proposed Project study area.
1i. Preserve existing California fan palms in natural settings and other individual specimen trees which contribute to the community character and provide wildlife habitat.	N/A	There are no California fan palms within the Proposed Project study area.
1j. Preserve and encourage the open space designation of wildlife corridors which are essential to the long-term viability of wildlife populations.	N/A	Impacts to sensitive vegetation communities would be mitigated at a 1:1 ratio (**MM-BIO-8**); therefore, habitat for birds and animals would be maintained.
1k. Integrate open space dedications in private developments with surrounding uses to maximize a functional open space/recreation and wildlife management system.	N/A	There are no private developments as part of the Proposed Project.

Source: Appendix C.

Impacts to biological resources would be less than significant or would be mitigated to a less-than-significant level. The Proposed Project would comply with requirements of local policies and ordinances

protecting biological resources through the implementation of the recommended mitigation measures. Therefore, the Project would not conflict with local policies or ordinances protecting biological resources.

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?

No Impact. The IID is currently in the process of preparing a Natural Community Conservation Plan and Habitat Conservation Plan NCCP/HCP, which is anticipated to cover 96 fish, wildlife, and plant species for a term of up to 75 years (IID 2022). Since these plans are still awaiting approval, the Proposed Project is not subject to the IID's NCCP/HCP.

Desert Renewable Energy Conservation Plan

Less-Than-Significant Impact. BLM has adopted the Desert Renewable Energy Conservation Plan (DRECP), which provides protection and conservation of desert ecosystems while allowing for appropriate development of renewable energy projects. The Draft DRECP was originally developed as an HCP/NCCP and a BLM Land Use Plan Amendment covering both public and private lands across seven counties, including Imperial County. In October 2015, the DRECP BLM Land Use Plan Amendment and Final EIS, which addresses renewable energy, land use, and conservation on BLM lands only, was released (BLM 2015). Although the DRECP plan area includes the project area, the DRECP currently only applies to renewable energy projects and would not be applicable to the Proposed Project. Furthermore, the project is not within BLM lands. Therefore, the proposed program would not conflict with the goals and policies of the DRECP. Regardless, determination of significant impacts and recommendations for mitigation measures to preserve or protect habitat and to otherwise ensure protection of identified species have been included in this report.

The Proposed Project study area is not located within any other local, regional, or state conservation planning areas. Impacts of the project on an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan would be less than significant.

4.2.5 Mitigation Measures

The following mitigation measures would reduce potentially significant impacts to biological resources to less-than-significant levels.

MM-BIO-1 General Avoidance and Minimization Measures

The following avoidance and minimization measures shall be implemented during project construction and operations and maintenance. These measures have been organized into subcategories for ease of reading.

Work Hours

1. Construction and operations and maintenance activities within 50 feet of the outside edge of the construction zone or work area containing habitat for special-status wildlife will be prohibited between sunset and sunrise, and all construction-related or maintenance-related lighting will be turned off during that period, with the exception of lighting for maintenance during operations and maintenance and emergencies (defined as an imminent threat to life or significant property) activities. If necessary, lighting for maintenance during operations and maintenance and emergencies within 50 feet of habitat for special-status wildlife will be directed away from natural areas.

Debris/Non-native Vegetation/Pollution

- Fully covered trash receptacles that are animal-proof will be installed and used during construction to contain all food, food scraps, food wrappers, beverage containers, and other miscellaneous trash. Trash contained within the receptacles will be removed at least once a week from the Proposed Project site.
- No litter, construction materials, or debris will be discharged into state-jurisdictional waters.
- Construction work and operations and maintenance areas shall be kept clean of debris, such trash, and construction materials.

Vehicle and Equipment Restrictions and Maintenance

- Night-time construction should be minimized to the extent possible. However, if night-time activity (e.g., equipment maintenance) is necessary, then the speed limit shall be 10 mph.
- Vehicle operation within state-jurisdictional waters when surface water is present will be prohibited. Any equipment or vehicles driven and/or operated within or adjacent to a state-jurisdictional channel will be checked and maintained by the operator daily to prevent leaks of oil or other petroleum products that could be deleterious to aquatic life if introduced to the watercourse.
- During construction, vehicles and equipment access will be limited to the identified impact areas, and ingress and egress will be limited to existing roads. During operations and maintenance, vehicles and equipment will be

limited to maintenance access roads and the minimal area necessary to perform the work.

2. Staging and storage areas for spoils, equipment, materials, fuels, lubricants, and solvents will be located outside the state-jurisdictional channels and within the designated impact area. Stationary equipment, such as motors, pumps, generators, compressors, and welders, located within or adjacent to state-jurisdictional waters shall be positioned over drip-pans or other containment. Prior to refueling and lubrication, vehicles and other equipment shall be moved away from the state-jurisdictional channels.

Other Restrictions on Activities and Personnel

- No pets, such as cats or dogs, should be permitted on the Proposed Project site during construction or operations and maintenance.

3. Any contractor, employee, or agency personnel who is responsible for inadvertently killing, injuring, or trapping a listed species shall immediately report the incident to the project biologist during construction and the operations manager during operations and maintenance. The project biologist or operations manager shall contact the USFWS (for federal Endangered Species Act species) and CDFW (for California Endangered Species Act species) immediately in the case of a dead, injured, or entrapped listed species. The Sacramento USFWS Office and CDFW shall be notified in writing within 3 working days of the accidental death or injury to a listed species during project-related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS office that covers Imperial County is located at 2177 Salk Avenue, Suite 250, Carlsbad, California 92008, 760.431.9440. The CDFW Inland Desert Region office is located at 3602 Inland Empire Boulevard, Suite C-220, Ontario, California 91764, 909.484.0167.

4. To prevent inadvertent entrapment of special-status wildlife during construction, all excavated wells, steep-walled holes or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day, or be provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped wildlife. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape.

5. All pipes, culverts, or similar structures with a diameter of 4 inches or more that are stored at a construction site for one or more overnight periods shall be thoroughly inspected for special-status wildlife or nesting birds before the pipe

is subsequently buried, capped, or otherwise used or moved in any way. If an animal is discovered inside a pipe, that section of pipe shall not be moved until the project biologist has been consulted and the animal has either moved from the structure on its own accord or until the animal has been captured and relocated by the project biologist. If a federally or state-listed species is discovered, that section of pipe shall not be moved until the USFWS and/or CDFW has been consulted. If necessary, under the direct supervision of the project biologist, the pipe may be moved once to remove it from the path of construction activity until the species has escaped.

MM-BIO-2 Environmental Awareness Training, Biological Monitoring, and Compliance

Worker Environmental Awareness Program and Ongoing Training

Prior to the initiation of any on-site grading, all construction/contractor personnel working on site must complete training through a Worker Environmental Awareness Program (WEAP). New construction workers engaged in construction activities (e.g., grading, utility installation, etc.) shall complete WEAP training within the first week of deployment on the site. Additionally, operational staff shall complete WEAP training prior to deployment on the site.

The training shall include the following:

- Provide the training materials for WEAP training. These materials shall include the measures and mitigation requirements for protected plant and wildlife species (e.g., avoidance and buffer requirements, night-time construction limitations, etc.); and the location and mitigation requirements for waters of the state. WEAP training will also include driver training to avoid and minimize collision risks with protected species, and reporting protocols in the event that any dead or injured wildlife are discovered.
- Copies of mitigation measures and permits from resource agencies, such as the CDFW and Regional Water Quality Control Board (RWQCB), will be made available.

Biological Monitoring and Compliance Documentation

- The project biologist shall perform the biological monitoring and compliance documentation for the project as follows:

- Prior to the initiation of any on-site grading, the project biologist will document that required pre-construction surveys and/or relocation efforts have been implemented.
- The project biologist will periodically monitor activities during initial grading.
- The project biologist will note any evidence of trash or microtrash and, if present, communicate the presence and requirement to remove the trash to the construction manager.

MM-BIO-3 Burrowing Owl Surveys and Avoidance/Relocation

No less than 14 days prior to ground-disturbing activities (vegetation clearance, grading), a qualified wildlife biologist (i.e., a wildlife biologist with previous burrowing owl survey experience) shall conduct pre-construction take avoidance surveys on and within 200 meters (656 feet) of the construction zone to identify occupied breeding or wintering burrowing owl burrows. The take avoidance burrowing owl surveys shall be conducted in accordance with the Staff Report on Burrowing Owl Mitigation (2012 Staff Report; CDFG 2012) and shall consist of walking parallel transects 7 to 20 meters apart, adjusting for vegetation height and density as needed, and noting any burrows with fresh burrowing owl sign or presence of burrowing owls. As each burrow is investigated, biologists shall also look for signs of American badger and desert kit fox. Copies of the burrowing owl survey results shall be submitted to the CDFW.

If burrowing owls are detected on site, no ground-disturbing activities shall be permitted within 200 meters (656 feet) of an occupied burrow during the breeding season (February 1 to August 31), unless otherwise authorized by CDFW. During the nonbreeding season (September 1 to January 31), ground-disturbing work can proceed near active burrows as long as the work occurs no closer than 50 meters (165 feet) from the burrow. Depending on the level of disturbance, a smaller buffer may be established in consultation with CDFW.

If avoidance of active burrows is infeasible during the nonbreeding season, then, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping, a qualified biologist shall implement a passive relocation program in accordance with Appendix E (i.e., Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans) of the 2012 CDFW Staff Report on Burrowing Owl Mitigation (CDFG 2012). Passive relocation consists of excluding burrowing owls from occupied burrows and providing suitable artificial burrows nearby for the excluded burrowing owls. A burrowing owl monitoring and mitigation plan will be prepared that

outlines how passive relocation would occur and where the replacement burrows would be constructed. It would also outline the monitoring and maintenance requirements for the artificial burrows.

.MM-BIO-4 Nesting Bird Pre-construction Surveys and Avoidance Plan.

This measure would protect these nesting special-status species and more common species protected under the MBTA, which prohibits the "take" of any migratory bird or any part, nest, or eggs of any such bird. The MBTA applies to over 800 species of birds, including rare and common species. Burrowing owl is addressed separately in a species-specific biological resource protection measure (**MM-BIO-3**).

The project biologist shall conduct pre-construction surveys no earlier than 7 days prior to any on-site grading and construction activities within each construction area and a 500-foot buffer that occurs during the nesting/breeding season of special-status bird species potentially nesting on the site, with the exception of burrowing owl, which is addressed in **MM-BIO-3**. The pre-construction surveys shall be conducted between March and September, or as determined by the project biologist.

The purpose of the pre-construction surveys will be to determine whether occupied nests are present in the construction zone or within 500 feet of the construction zone boundary. If occupied nests are found, then limits of construction to avoid occupied nests shall be established by the project biologist in the field with flagging, fencing, or other appropriate barriers (e.g., 250 feet around active passerine nests to 500 feet around active non-listed raptor nests), and construction personnel shall be instructed on the sensitivity of nest areas. The project biologist shall serve as a construction monitor during those periods when construction activities are to occur near active nest areas to avoid inadvertent impacts to these nests. The project biologist may adjust the 250-foot or 500-foot setback at his or her discretion depending on the species and the location of the nest (e.g., if the nest is well protected in an area buffered by dense vegetation). Once a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival, construction may proceed in the setback areas.

MM-BIO-5 Desert Tortoise Surveys and Avoidance Plan.

The proposed Project occurs within the range of desert tortoise. Although the site is highly disturbed with little habitat value, IID will complete protocol level surveys over all areas proposed to be directly or indirectly affected by the Project out of an abundance of caution, using appropriately qualified biologists, according to protocols in Preparing for Any Action that May Occur within the Range of the Mojave Desert Tortoise (USFWS 2019). IID will work with CDFW and USFWS concurrently.

MM-BIO-6 Flat-tailed horned lizard and Colorado Desert fringe-toed lizard Avoidance and Minimization Measures.

The FTHL was not present during any of the focused surveys. Focused surveys were not conducted for the CDFTL, but they were not observed during the FTHL focused surveys. Although the Project Area does not contain suitable habitat for the FTHL and CDFTL, protocol surveys will be implemented out of an abundance of caution and, removal in consultation with wildlife agencies will occur as follows:

1.Pre-Construction Survey and Monitoring: A qualified biological monitor will survey for FTHL and CDFTL prior to ground disturbing work within suitable habitats (identified as creosote bush scrub, creosote bush-white bursage, and white bursage scrub vegetation communities). To the extent feasible, methods to find both species will be designed to achieve a maximal capture rate and will include, but not be limited to, using strip transects, tracking, and raking around shrubs. Prior to construction, the minimum pre-construction survey effort will be 30 minutes per 0.40 hectare (1 acre).

2. If any FTHL or CDFTL is observed during construction activities, individuals will be relocated adjacent to the Project area in accordance with the Fencing and Removal Survey Protocols (Appendix 7 of the Flat-tailed Horned Lizard Interagency Coordinating Committee). Biologists that handle lizards will first obtain all necessary permits and authorization from the CDFW. Any FTHL or CDFTL relocation will include:

   a. Accurate records maintained by the biological monitor(s) for each relocated lizard including sex, snout-vent length, weight, air temperature, location, date, time of capture and release, a close-up photo of the lizard, and a photo of the habitat where it was first encountered. To the extent feasible, a sample of the lizard scat will be collected. A Horned Lizard Observation Data Sheet and a Project Reporting Form, from Appendix 8 of the Flat-tailed Horned

Lizard Rangewide Management Strategy (Flat-tailed Horned Lizard Interagency Coordinating Committee 2003) will be completed. During construction, quarterly reports describing lizard removal activity will be submitted to the IID and CDFW.

b. The removal of lizard(s) out of harm's way, including those found on access or maintenance roads, will include their relocation to nearby suitable burrowing habitat away from proposed Project components and roads. Any relocated FTHL or CDFTL will be placed in the shade of a large shrub in undisturbed habitat. The Project Biologist or biological monitor will be allowed some judgment and discretion when relocating lizards to maximize survival of lizards found on the proposed project site.

MM-BIO-7 Coordination of Jurisdictional State Permits

To comply with the state regulations for impacts to "waters of the State," the need for the following agency permits and/or agreements will be verified:

a. A Clean Water Act, Section 402 permit issued by the California RWQCB for all project-related disturbances of waters of the state and/or associated wetlands.

b. A Section 1602 Streambed Alteration Agreement issued by the CDFW for all project-related disturbances of any streambed.

MM-BIO-8 Restoration of Riparian and Wetland Communities

IID will restore and enhance sensitive, riparian and wetland communities to mitigate for permanent impacts to 0.15 acres of arrow weed thickets and 0.21 acres of cattail marshes at a 1:1 mitigation ratio. This mitigation acreage will be augmented nearby at the beginning of All-American Drain 2/2A which extends further east.

4.2.6 Level of Significance After Mitigation

With implementation of **MM-BIO-1** through **MM-BIO-8**, the Proposed Project would have a less than significant impact on biological resources.

Figure 4-1 Study Area and Rare Plant Survey Area

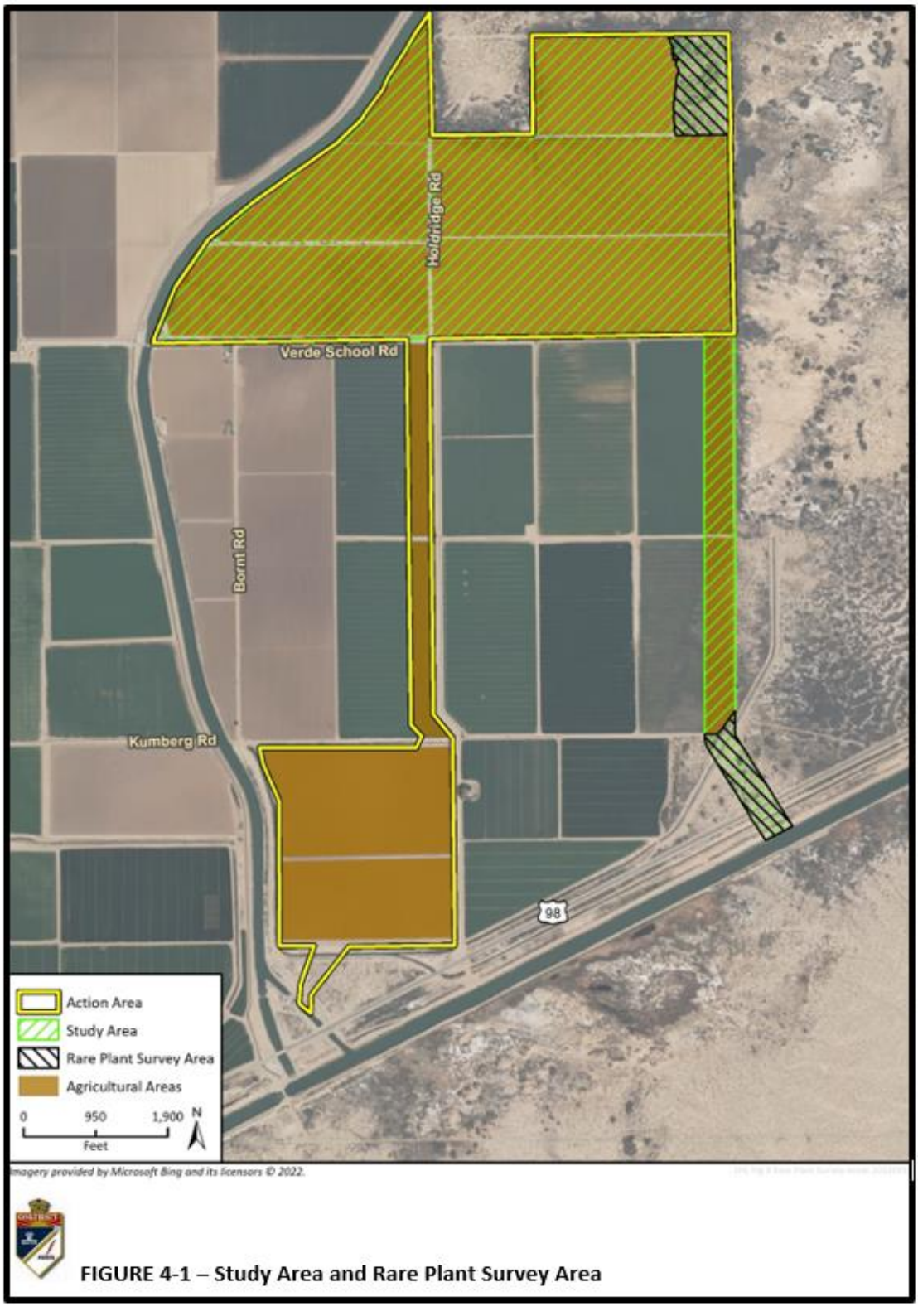

FIGURE 4-1 – Study Area and Rare Plant Survey Area

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Figure 4-2 Vegetation Communities and Land Covers

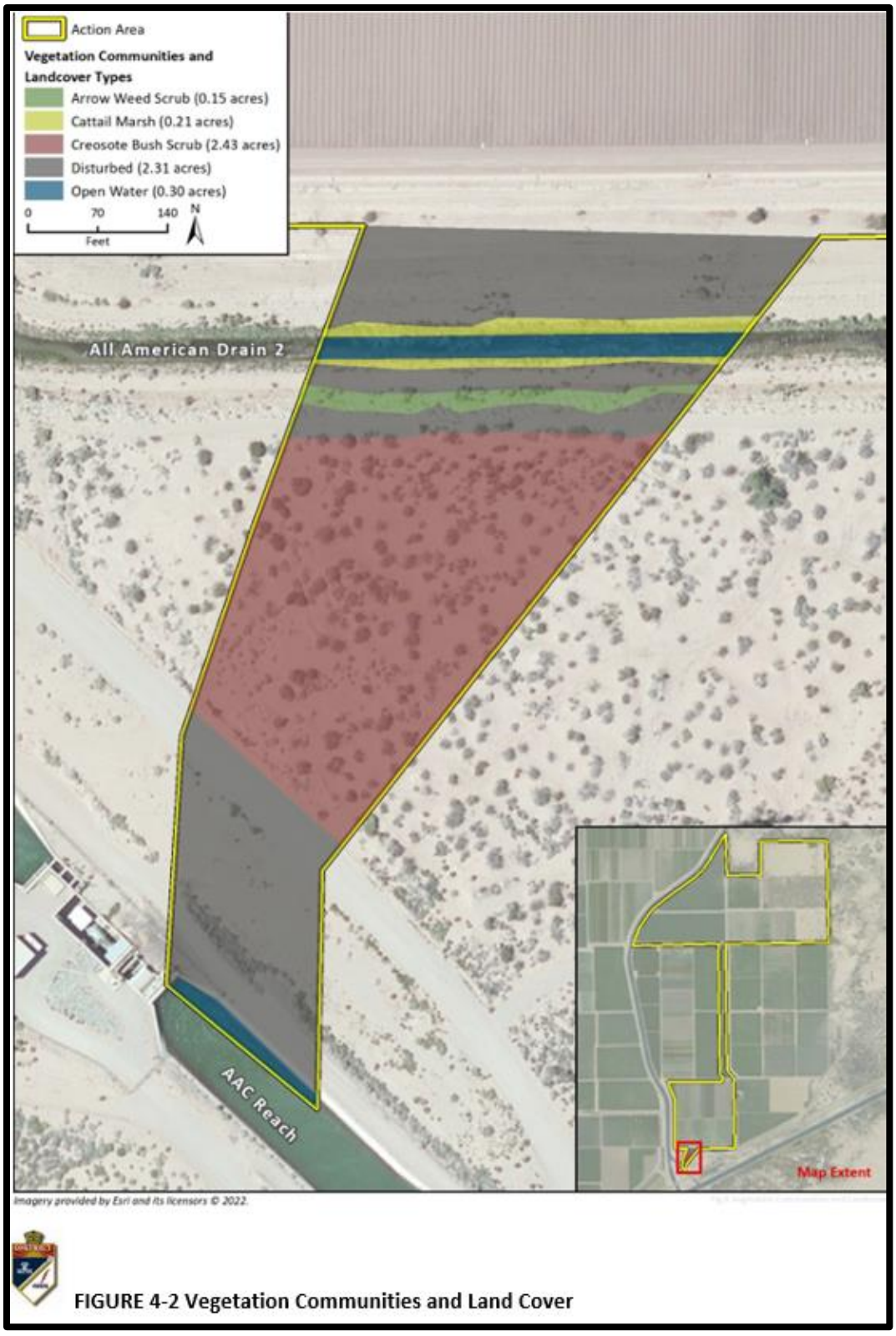

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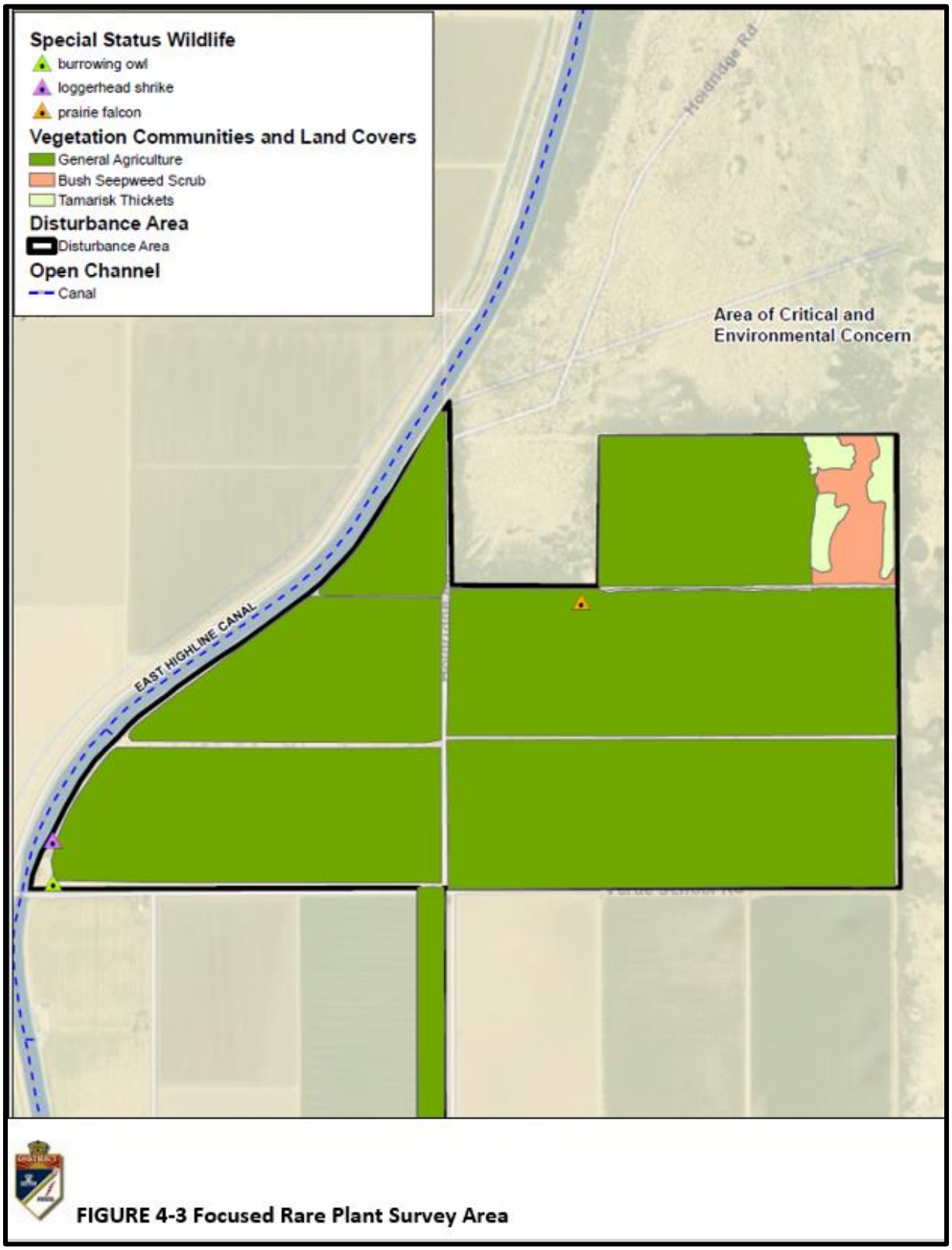
Figure 4-3 Focused Rare Plant Survey Area



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4.3 CULTURAL RESOURCES

This section describes the existing cultural resources inventory of the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Proposed Project. The analysis herein is based on the Supplemental Cultural Resources Assessment for the East Highline Reservoir and Intake Channel Project included as Appendix D to this Draft EIR.

4.3.1 Existing Conditions

The area of potential effect (APE) includes the footprint of the proposed reservoir and a 300-foot ROW to contain the intake channel all of which is proposed to be located within an APE corridor up to 550-feet in width. Immediately east of the basin area APE is the ACEC, managed by BLM. All Proposed Project activities would avoid the ACEC.

The Project site is located within the Sonoran Desert, bounded on the west by the Peninsular Ranges and bounded on the east by the Colorado River. The reservoir portion of the APE is located entirely within agricultural fields, but the intake channel extends south, bisecting earthworks, including irrigation drains and federal land, before it reaches the AAC Reach. The APE elevation does not vary greatly and averages approximately 35 feet above mean sea level. The APE is dominated by levelled agricultural land and linear earthworks; however, there is a section of disturbed desert land that is bisected by the intake channel. There is a communication tower, All-American Drain 2/2A and numerous access dirt road that dominate this area managed by Reclamation. Creosote bush (*Larrea tridentata*) scrub is also spread out through this area.

4.3.1.1 Cultural Setting

As discussed in Appendix D, the general cultural sequence for the Colorado Desert can be viewed in terms of three or more time periods based on the evolutionary stages proposed by Willey and Phillips (1958). Among contemporary archaeologists and cultural resource managers, the Paleoindian and Archaic evolutionary stages of Willey and Phillips (1958) have evolved into time periods and, in Southern California, their Formative stage became the Late Prehistoric time period. The first Spanish exploration of what is now Imperial County occurred in 1540, when Hernando de Alarcón ascended the Colorado River probably up to modern-day Yuma and Winterhaven. Geological time periods and the evolutionary stages are outlined in detail in Appendix D.

4.3.1.2 Methodology

In preparation of the cultural resources inventory report prepared for the Proposed Project, an inventory of all resources within the Proposed Project APE was compiled to determine possible impacts or potential effects to cultural or historic resources. The presence and significance of existing cultural or historic resources associated with the Proposed Project were determined using the methodologies outlined below.

Archaeological/Cultural Resources

Cultural Resource Literature and Records Search

An examination of existing maps, records, and reports was conducted to determine if the Proposed Project could potentially impact previously recorded cultural resources. On January and February 2017, Dudek conducted a literature and records search of the original Study Area/original APE at the South Coastal Information Center (SCIC) at San Diego State University, including a 1-mile-wide buffer. An additional records search was completed by Rincon on March 17, 2021, to include the Proposed Project's intake channel alternative connecting at the AAC Reach and a 0.5-mile radius (Expanded Study Area). In addition to a review of previously prepared site records and reports, the records search also included a review of historical maps of the original APE and the Proposed Project APE, ethnographies, the NRHP, the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and Archaeological Determinations of Eligibility.

The objective of these records searches was to determine whether prehistoric or historical cultural resources had been recorded previously within the original and expanded Study Area or vicinity to provide information regarding the sensitivity of the EHL Reservoir Project APE for encountering cultural resources (see Appendix D - Figure 5 – Survey Areas and Record Search Limits).

Surveys

Though the Proposed Project APE has been previously inventoried, many of the previous studies are dated; thus, the entire APE was surveyed. IID initially retained Dudek for cultural resource services. The original survey of the original Project APE was conducted between July 27 and 28, 2017, and between January 22 and 24, 2018 by Dudek. The cultural resource surveys consisted of approximately 560 acres, including the reservoir basin location and AAC Intake Channel Alternative (original Study Area/original APE). In 2021, Rincon Consultants, Inc. was contracted to complete a supplemental assessment and complete additional cultural resources site visits and to complete pedestrian surveys and assessments for an alternative intake route not directly connecting to the AAC or traversing SR-98 (AAC Reach Intake Channel Alternative). The literature search and

surveys are referred to as the "Expanded Study Area/Proposed Project APE." The total Study Area reviewed by Dudek and Rincon includes approximately 780 acres while the proposed Project APE is limited to the direct proposed Project footprint and APE of approximately 711 acres. See Appendix D for a more detailed description of survey areas.

The reservoir portion of the Proposed Project APE consists entirely of agricultural land. The intake channel crosses earthworks including the All-American Drains 2/2A and Bornt Road. There is a small segment of undeveloped desert land located between the All-American Drain 2 and SR-98. The intake channel portion of the Proposed Project APE was surveyed using transects parallel to the route at 15-meter intervals. The larger reservoir portions of the Proposed Project APE were surveyed using a combination of north–south and east–west transects at 15-meter intervals. In this manner, all portions of the Proposed Project APE were subject to pedestrian survey.

An iPad Air with georeferenced maps and Global Positioning System (GPS) capabilities was used to aid surveying and site recordation. Records of sites previously identified within the Proposed Project APE were loaded onto the iPad for field reference. The results of the supplemental field surveys completed by Rincon of the original project area and the proposed Project APE identified 21 additional cultural resources. Documentation of cultural resources complied with the Office of Historic Preservation and Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716–44740) and the California Office of Historic Preservation Planning Bulletin Number 4(a). Any sites identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the Instructions for Recording Cultural Resources.

Excavation

Sites were evaluated using close-interval survey, surface scrapes, shovel test pits (STPs), and shovel test units. Surface scrapes are shallow (5 to 10 centimeters) and broad excavations. STPs are 0.5 meters by 0.3 meters, excavated in 20-centimeter levels. Shovel test units are 1 meter by 0.5 meters, excavated in decimeter levels. All hand-excavated soils were screened through 1/8 inch (3 millimeter) mesh. All excavated units were backfilled at the conclusion of the unit's excavation.

Photographs of each unit profile were recorded to document soils and disturbances. An iPad Air with georeferenced maps and GPS capabilities was used to record the locations of excavation units and surface artifacts. Field notes were recorded on standardized forms to log artifacts, soil descriptions, disturbances, and any other pertinent information for the Proposed Project APE.

Tribal Cultural Resources

Native American Heritage Commission Sacred Lands File Search

A search of the Native American Heritage Commission (NAHC) Sacred Lands File was also conducted for the Proposed Project APE on April 10, 2017. Outreach letters were mailed on August 23, 2017, to all Native American group representatives included on the NAHC contact list. These letters attempt to solicit additional information relating to Tribal cultural resources (TCRs) that may be affected by the Proposed Project. Native American representatives were requested to define a general area where known resources intersect the Proposed Project APE. Under CEQA, the lead agency is required to perform formal government-to-government consultation with Native American Tribes under Assembly Bill 52. Please see Section 4.6 of this EIR for detail information on tribal cultural resources.

4.3.1.3 Results

Archaeological/Cultural Resources

South Coastal Information Center Records Search

As previously noted, records searches conducted by Dudek (2017) and Rincon (2021) identified 38 previously identified cultural resources within a 0.5-mile to 1-mile radius of the APE (Appendix D). Of the 38 previously identified sites, one cultural resource is a multi-component archaeological site (P-13-008653/ CA-IMP-8050) located within of the proposed EHL Reservoir Project APE. Resource P-13-008653 is a multi-component site including a historical refuse scatter and a prehistoric ceramic scatter (Dominici 2003a). The historical refuse scatter as originally recorded included metal debris, square meat tins, glass fragments, and a brown bottle base with a "Valve Mark" (c 1930 to 1940). The refuse scatter was noted in an area affected by grading or bulldozing.

Two previously identified built environment resources were identified within the proposed APE during the records search as well: the All-American Drain 2/2A (P-13-008668) was previously found eligible for listing in the NRHP as a contributor to the AAC historic district and the East Highline Canal (P-13-008333/ CA-IMP-7835H) was recorded but not formally evaluated for historic significance.

An evaluation for listing in the NRHP for the East Highline Canal was completed as part of the Supplemental study. A review of the previous documentation and additional archival research concluded that the East Highline Canal is eligible for listing in the NRHP under Criteria A and C for its association with the AAC historic district (Appendix D).

Tile Drain Construction Maps

The fine-grained lake sediments in the principal portion of the Imperial Valley inhibit groundwater movement, and tile-drain systems are required to dewater the sediments to a depth below the root zone of crops and to prevent the accumulation of saline water on the surface. IID provided Dudek with tile drain construction maps that detail the installation of tile drains, a subsurface irrigation drainage system, throughout the proposed reservoir portion of the APE. The construction drawings show plan views of the agricultural field and the trajectories of the subsurface drainage system. Construction information is included in the margins of the maps including feature depths, installation details, and tile type. The maps suggest that the tile drains were installed in stages between 1951 and 1983. The installers included Lidco, La Bolsa, McElvany and Son, and Beaver. Noted tile materials included red clay, plastic, "beaver," Quality Tile Co, and ADS. It appears that the system of subsurface pipes is located at depths ranging between 4.5 and 9.2 feet (Appendix D).

Surveys

The pedestrian survey completed by Dudek relocated four of the six previously identified resources within the original proposed study area of which five were dropped off from the final EHL Project APE. The survey identified 1 new archaeological resource and 11 new built environment resources. The results of the supplemental field surveys completed by Rincon of the original project area and the proposed Project APE identified 21 additional cultural resources (see Table 4.3-1 for all recorded resources). This includes 18 new built environment resources: 11 unnamed historic-period irrigation ditches, three roads, and four drains (Mesa 5 Delivery Ditch, Mesa 6 Drain, and Delivery Ditch 1). None of the newly recorded built environment resources were recommended as eligible for listing in the NRHP. A map of the resources located within the proposed EHL Project APE can be found in Appendix D.

Resource P-13-008653/CA-IMP-8050, multi-component site including a historic refuse scatter and a prehistoric ceramic scatter (Dominici 2003) was relocated during the current survey and is in a similar condition to its original recording; however, the survey identified an additional prehistoric ceramic scatter and historic-period refuse scatter north of the original site boundary. These additional scatters, were recorded as nine historic-period artifact loci and two prehistoric ceramic artifact loci. These additions will expand the previous site boundaries (Appendix D).

Two isolated finds, ISO-EHL-1 and ISO-EHL-2 were also identified in the proposed EHL Reservoir Project APE. Isolates are typically ineligible for NRHP listing as their data potential is exhausted during the initial recording. The field survey also concluded that a previously recorded archaeological site (P-13-000316/ CA-IMP-316) is not in the proposed Project APE and is no longer extant.

Table 4.3-1
Previously and Newly Recorded Resources within the Proposed Project APE

Site Number	Trinomial	Era	Description	NRHP/CRHR Eligibility
P-13-008333	CA-IMP-7835H	Historic	East Highline Canal	Recommended Eligible
P-13-008668	—	Historic	All-American Drain 2/2A	Recommended Eligible
P-13-008653	CA-IMP-008050	Multi-component site	Prehistoric Ceramic and Historical Refuse scatters	Recommended Eligible
P-13-017219	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017220	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017221	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017222	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017223	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017225	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017226	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017227	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017228	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-017229	—	Historic	Irrigation Ditch	Recommended Not Eligible
P-13-018796		Historic	Bornt Road	Recommended Not Eligible
P-13-018799		Historic	Holdridge Road	Recommended Not Eligible
P-13-018802		Historic	Mesa 5 Delivery Ditch	Recommended Not Eligible
P-13-018803		Historic	Mesa 6 Drain	Recommended Not Eligible
P-13-018798		Historic	Irrigation Ditch	Recommended Not Eligible
P-13-018797		Historic	Verde School Road	Recommended Not Eligible
P-13-018800 (ISO-EHL-1)	CA-IMP-13489	Pre-Historic	Two Prehistoric Ceramic Sherds	Recommended Not Eligible
P-13-011801 (ISO-EHL-2)		Historic	Two crushed cans: one church key opened and one vent hole can	Recommended Not Eligible

NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources; APE = area of potential effect; — = no data.

4.3.2 Relevant Plans, Policies, and Ordinances

This project is subject to federal, state, and local regulations regarding cultural resources. The following section provides a summary of the applicable regulations, policies, and guidelines relating to the proper management of cultural resources for this project.

Federal

36 Code of Federal Regulations 800 and Section 106 of the National Historic Preservation Act

The National Historic Preservation Act (NHPA) established the NRHP and the President's Advisory Council on Historic Preservation, and provided that states may establish State Historic Preservation

Officers (SHPOs) to carry out some of the functions of the NHPA. Most significantly for federal agencies responsible for managing cultural resources, Section 106 of the NHPA directs that

> [t]he head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the NRHP.

Section 106 also affords the President's Advisory Council on Historic Preservation a reasonable opportunity to comment on the undertaking (16 USC 470f). Reclamation's responsibility for protecting cultural resources is primarily based on the NHPA; P.L. 89-665, as amended; its implementing regulations (36 CFR Part 800); and Reclamation Policy (LND P01) and Directives and Standards (LND 02-01). Section 106 of NHPA requires Federal agencies to consider the effects of their undertakings on historic properties. These properties are defined as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register).

36 Code of Federal Regulations (CFR) 800 implements Section 106 of the NHPA. It defines the steps necessary to identify historic properties (those cultural resources listed in or eligible for listing in the NRHP), including consultation with federally recognized Native American Tribes to identify resources with important cultural values; to determine whether or not they may be adversely affected by a proposed undertaking; and to outline the process for eliminating, reducing, or mitigating the adverse effects.

The content of 36 CFR 60.4 defines criteria for determining eligibility for listing in the NRHP. The significance of cultural resources identified during an inventory must be formally evaluated for historical significance in consultation with the California SHPO to determine if the resources are eligible for inclusion in the NRHP. Cultural resources may be considered eligible for listing if they possess integrity of location, design, setting, materials, workmanship, feeling, and association. The criteria for determining eligibility are essentially the same in content and order as those outlined under the CEQA, but the criteria under NHPA are labeled A through D (rather than 1–4 under CEQA).

Regarding criteria A through D of Section 106, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, cultural resources, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or

B. Are associated with the lives of persons significant in our past; or

C. 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

D. Have yielded or may be likely to yield, information important in prehistory or history (36 CFR 60.4).

The President's Advisory Council on Historic Preservation provides methodological and conceptual guidance for identifying historic properties. In 36 CFR 800.4, the steps necessary for identifying historic properties include:

- Determine and document the APE (36 CFR 800.16(d)).
- Review existing information on historic properties within the APE, including preliminary data.
- Confer with consulting parties to obtain additional information on historic properties or concerns about effects to these.
- Consult with Native American Tribes (36 CFR 800.3(f)) to obtain knowledge on resources that are identified with places which they attach cultural or religious significance.
- Conduct appropriate fieldwork (including phased identification and evaluation).
- Apply NRHP criteria to determine a resource eligibility for NRHP listing.

Fulfilling these steps is generally thought to constitute a reasonable effort to identify historic properties within the APE for an undertaking. The obligations of a federal agency must also assess whether an undertaking will have an adverse effect on cultural resources. An undertaking will have an adverse effect when (36 CFR Part 800.5(1))

> an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

The process of determining whether an undertaking may have an adverse effect requires the federal agency to confer with consulting parties in order to appropriately consider all relevant stakeholder concerns and values. Consultation regarding the treatment of a historic property may result in a Programmatic Agreement and/or Memorandum of Agreement between consulting parties that typically include the lead federal agency, SHPO, and Native American Tribes if they agree to be signatories to these documents. Treatment documents—whether resource-specific or generalized—provide guidance for resolving potential or realized adverse effects to known historic properties or to those that may be discovered during implementation of the undertaking. In all cases, avoidance of adverse effects to historic properties is the preferred treatment measure and it is generally the burden of the federal agency to demonstrate why avoidance may not be feasible. Avoidance of adverse effects may not be feasible if it would compromise the objectives of an undertaking that can be reasonably said to have public benefit. Other non-archaeological considerations about the benefit of an undertaking may also apply, resulting in the determination that avoidance is not feasible. In general, avoidance of adverse effects is most difficult when a permitted undertaking is being implemented, such as identification of an NRHP-eligible archaeological resource during earthmoving.

Bureau of Reclamation Cultural Resources Management Policy

Reclamation is responsible for the cultural resources it owns, controls, or administers on behalf of the United States and must assure their management in accordance with federal laws, regulations, executive orders, and Department of the Interior policies. Reclamation shall

A. identify, document, and evaluate cultural resources for listing in the National Register;

B. actively nominate eligible properties to the National Register;

C. to the fullest extent possible, manage and maintain historic properties, both reserved and transferred works, in a manner that preserves the character defining features that qualify them for listing in the National Register;

D. integrate cultural resources concerns early in project planning processes in order to identify opportunities to protect historic properties from adverse effects and avoid unnecessary delays, conflicts, and costs for Reclamation undertakings;

E. consider the effects of its undertakings on historic properties;

F. where adverse effects cannot be avoided, commit to fully completing mitigation measures prescribed in agreements executed with one or more of the following: State or Tribal Historic Preservation Offices, the Advisory Council on Historic Preservation, Native American Tribes, and other interested parties;

G. seek input and involvement from federal, state, Tribal, and local agencies, as well as the interested public, in carrying out Reclamation's CRM Program;

H. support an education and outreach program to inform the public of Reclamation's cultural resources stewardship responsibilities, activities, and accomplishments;

I. maintain accurate information on the types, location, status, and condition of its cultural resources, which shall be used in collaboration with other Reclamation programs such as asset management;

J. preserve and protect its museum property as prescribed in RM Policy, Museum Property Management, LND P05; D&S, Museum Property Management, LND 02-02; and D&S, Museum Records, LND 02-05;

K. identify NAGPRA cultural items under its control to ensure their appropriate protection, and repatriation or disposition in a timely manner according to statute and regulation;

L. to the extent possible, establish and implement alternatives for the continued use of historic properties that are no longer needed for current or projected Reclamation purposes in compliance with section 111 of NHPA;

M. to the extent possible, follow the Secretary of the Interior's Standards for the Treatment of Historic Properties for historic buildings and structures when complying with sustainability, accessibility, life safety and other applicable mandates;

N. as per RM D&S, Administration of the Archaeological Resources Protection Act (ARPA) on Bureau of Reclamation Land, LND 02-04, support management actions to prevent the theft of, damage to, or destruction of archaeological resources; and

O. as per LND 02-04, allow archaeological investigation and work on Reclamation land only after issuing a permit for such activity.

State

California Register of Historical Resources (California Public Resources Code Section 5020 et seq.)

In California, the term "cultural resource" includes but is not limited to "any object, building, structure, 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" (California Public Resources Code (PRC), Section 5020.1(j)). In 1992, the California legislature established CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's cultural resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC, Section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Cultural Resources Commission determines that

it is a significant resource and that it meets any of the following NRHP criteria (PRC, Section 5024.1(c)):

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. 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.

Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local cultural resource surveys. The SHPO maintains the CRHR.

California Environmental Quality Act

As described further below, the following CEQA Statutes and Guidelines are relevant to the analysis of archaeological and historic resources:

1. PRC, Section 21083.2(g): Defines "unique archaeological resource."
2. PRC, Section 21084.1 and CEQA Guidelines Section 15064.5(a): Defines cultural resources. In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change" in the significance of a cultural resource. It also defines the circumstances when a project would materially impair the significance of a cultural resource.
3. PRC, Section 5097.98 and CEQA Guidelines Section 15064.5(e): These statutes set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
4. PRC, Sections 21083.2(b)–(c) and CEQA Guidelines Section 15126.4: These statutes and regulations provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; identifies preservation in place as the preferred manner of mitigating impacts to significant archaeological sites.

Under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an [sic] cultural resource" (PRC, Section 21084.1; CEQA Guidelines Section 15064.5(b)). A "cultural resource" is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question (a) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) 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 (d) has yielded, or may be likely to yield, information important in prehistory or history.

The term cultural resource also includes any site described in a local register of historic resources, or identified as significant in a cultural resources survey (meeting the requirements of PRC, Section 5024.1(q)).

CEQA also applies to "unique archaeological resources." PRC, Section 21083.2(g) defines a "unique archaeological resource" as any archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

All cultural resources and unique archaeological resources—as defined by statute—are presumed to be historically or culturally significant for purposes of CEQA (PRC, Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from determining that a resource is a cultural resource even if it does not fall within this presumption (PRC, Section 21084.1; 14 CCR 15064.5(a)). A site or resource that does not meet the definition of cultural resource or unique archaeological resource is not considered significant under CEQA and need not be analyzed further (PRC, Section 21083.2(a); 14 CCR 15064.5(c)(4)).

Under CEQA, significant cultural impact results from a "substantial adverse change in the significance of an [sic] cultural resource [including a unique archaeological resource]" due to the "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a cultural resource would be materially impaired" (14 CCR 15064.5(b)(1); PRC, Section 5020.1(q)). In turn, the significance of a cultural resource is materially impaired when a project

1. Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of cultural resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an cultural resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA (14 CCR 15064.5(b)(2)).

Pursuant to these sections, CEQA first evaluates whether a project site contains any cultural resources, then assesses whether that project will cause a substantial adverse change in the significance of a cultural resource such that the resource's historical significance is materially impaired.

When a project significantly affects a unique archaeological resource, CEQA imposes special mitigation requirements. Specifically (PRC, Sections 21083.2(b)(1)–21083.2(b)(4)),

> [i]f it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:

1. Planning construction to avoid archaeological sites.
2. Deeding archaeological sites into permanent conservation easements.
3. Capping or covering archaeological sites with a layer of soil before building on the sites.
4. Planning parks, greenspace, or other open space to incorporate archaeological sites.

If these preservation-in-place options are not feasible, mitigation may be accomplished through data recovery (PRC, Section 21083.2(d); 14 CCR 15126.4(b)(3)(C)). PRC, Section 21083.2(d) states that

> [e]xcavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project. Excavation as mitigation

> shall not be required for a unique archaeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report.

These same requirements are set forth in slightly greater detail in CEQA Guidelines Section 15126.4(b)(3), as follows:

A. Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

B. Preservation in place may be accomplished by, but is not limited to, the following:

   1. Planning construction to avoid archaeological sites;
   2. Incorporation of sites within parks, greenspace, or other open space;
   3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
   4. Deeding the site into a permanent conservation easement.

C. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the cultural resource, shall be prepared and adopted prior to any excavation being undertaken.

Note that, when conducting data recovery, "[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation" (14 CCR 15126.4(b)(3)). However, "[d]ata recovery shall not be required for an cultural resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historic resource, provided that determination is documented in the CEQA document and that the studies are deposited with the California Cultural resources Regional Information Center" (14 CCR 15126.4(b)(3)(D)).

Finally, CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are set forth in PRC Section 5097.98.

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan is the official conservation guide for all decision makers including the County Board of Supervisors, Planning Commission, Airport Land Use Commission, and various departments in addition to other federal, state, or county governmental decision-making bodies. It shall also identify goals and policies to ensure the managed use of environmental and cultural resources. The goals and objectives outlined below are specific to cultural resources (County of Imperial 2016).

Preservation of Cultural Resources

Goal 3: Preserve the spiritual and cultural heritage of the diverse communities of Imperial County.

Objective 3.1: Protect and preserve sites of archaeological, ecological, historical, and scientific value, and/or cultural significance.

Objective 3.2: Develop management strategies to preserve the memory of important historic periods, including Spanish, Mexican, and early American settlements of Imperial County.

Objective 3.3: Engage all local Native American Tribes in the protection of Tribal cultural resources, including prehistoric trails and burial sites.

Additionally, the following policies and programs outlined in the Conservation and Open Space Element describe activities which are intended to implement the goals and objectives that have been described above:

Policy: Identify and document significant historic and prehistoric resources, and provide for the preservation of representative and worth examples; and recognize the value of historic and prehistoric resources, and assess current and proposed land uses for impacts upon these resources

Programs:

- Encourage the use of open space easements in the conservation of high value cultural resources.
- Consider measures which would provide incentives to report archaeological discoveries immediately to the Imperial Valley Desert Museum.

- Coordinate with appropriate federal, state, local, and Tribal agencies to provide regular updates to the "Sensitivity Map for Cultural Resources".
- Discourage vandalism of cultural resources and excavation by persons other than qualified archaeologists. The County shall study the feasibility of implementing policies and enacting ordinances toward the protection of cultural resources such as can be found in California Penal Code, Title 14, Point 1, Section 622-1/2. The County should maintain confidentiality of specific resource locations to prevent vandalism and desecration of sensitive cultural resources.
- The County will use the CEQA process to conserve cultural resources and conform to Senate Bill 18 "Consultation with Tribal Governments" and Assembly Bill 52 "Consultation with Tribal Governments". Public awareness of cultural heritage will be stressed. All information and artifacts recovered in this process will be stored in an appropriate institution and made available for public exhibit and scientific review.

4.3.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to cultural resources would occur if the project would:

1. Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.
3. Disturb any human remains, including those interred outside of formal cemeteries.

4.3.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact. As previously discussed, Dudek conducted a records search (2017) and Rincon (2021) at the SCIC at San Diego State University. Of the 38 previously identified sites, one cultural resource is a multi-component archaeological site (P-13-008653/ CA-IMP-8050) located within the proposed EHL Reservoir Project APE. Two previously identified built environment resources were identified within the proposed APE during the records search: the All-American Drain 2/2A (P-13-008668) was previously found eligible for listing in the NRHP

as a contributor to the AAC historic district and the East Highline Canal (P-13-008333/ CA-IMP-7835H) (Appendix D). The EHL Reservoir Project proposes minor modifications to the East Highline Canal and the All-American Drain 2/2A that will not affect the historic integrity or significance of the resources and will avoid an adverse effect to these historic properties.

East Highline Canal (P-13-008333/ CA-IMP-7835H) - Applying the criteria of adverse effect, the proposed undertaking would have no affect or significant impact to any major historic features of the EHL Canal, such as bridges, checks, or existing turnouts. Of the approximately 45-mile-long EHL Canal, only a very small portion, less than 150 feet, will be altered by the Proposed Project. The proposed structure that will hold the discharge pipes will be constructed from concrete and will be visible along the eastern bank of the EHL Canal. Though this will disrupt the continued earthen bank of the EHL Canal, other concrete structures are located further along the canal. These other concrete structures deliver water from the EHL Canal into the adjacent agricultural fields, which is the original function of the canal. The addition of another concrete structure along the EHL Canal will not impact the integrity of the resource. The proposed connection will support the canal's purpose of reliably delivering water to agricultural fields.

The East Highline Canal was previously recommended eligible for the NRHP due to its association with the AAC, an NRHP-eligible resource. An evaluation for listing in the NRHP for the East Highline Canal was completed as part of the Supplemental study. A review of the previous documentation and additional archival research concluded that the East Highline Canal is eligible for listing in the NRHP under Criteria A and C for its association with the AAC historic district. However, none of the major features that associate the EHL Canal with the AAC for inclusion in the NRHP will be impacted by the Proposed Project. Therefore, the Proposed Project would have no adverse effect on this historic property under Section 106 of the NHPA, and the Proposed Project would not have a significant impact on this historical resource.

All-American Drain 2/2A (P-13-008668) – AA Drain 2/2A is an approximate 2.5 mile-long earth lined seepage collection drain that was also previously found eligible for listing in the NRHP as a contributor to the AAC historic district. The EHL Reservoir Project proposes minor alterations to AA Drain 2 to accommodate the intake channel that will traverse the AA Drain 2. The proposed structure to accommodate this design feature is a culvert underneath the proposed intake channel. The proposed alterations are considered minor and will not affect the historic integrity of significance of the resource and will avoid an adverse effect to this historic property.

Multi-component archaeological site (P-13-008653/ CA-IMP-8050- Multi-component archaeological site P-13-008653/CA-IMP-8050 consists of historic and pre-historic scatter and is within the proposed EHL Reservoir Project APE. The site is not recommended eligible for the historic component of the resource, however the pre-historic component of the resource is

recommended for inclusion on the NRHP; the site will be affected by project activities, but the effect will be less than significant as the project, and more specifically, the intake channel is designed to avoid this resource.

Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

Less-Than-Significant Impact with Mitigation. The majority of the resources identified within the Proposed Project APE are built environment structures that are not eligible for listing in the NRHP. However, multi-component archaeological site P-13-008653/CA-IMP-8050 consists of historic and pre-historic scatter and is within the proposed EHL Reservoir Project APE. The pre-historic component of the resource is recommended for inclusion on the NRHP and although the site will be affected by project activities, the effect will be less than significant as the project, and more specifically, the intake channel is designed to avoid this archaeological resource.

Nonetheless, there is still the possibility of uncovering subsurface archaeological deposits near the boundaries of these previously identified resources. Impacts to any such inadvertent discoveries would be considered potentially significant. Monitoring during construction to appropriately treat inadvertent discoveries would reduce that impact to a level below significance. With incorporation of **Mitigation Measure** (**MM) CR-1** and **MM-CR-2**, the Proposed Project would result in impacts that are less than significant.

Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less-Than-Significant Impact with Mitigation. While the presence of human remains in the project area is highly unlikely, a potential still exists for unanticipated human burials or cremations to occur. If human remains are encountered on site, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. **MM-CR-2** requires that the County coroner be notified of the find immediately. If the remains are determined to be prehistoric, the coroner will notify NAHC, which will determine and notify an Most Likely Descendent. With the permission of the landowner or his/her authorized representative, on private land, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

4.3.5 Mitigation Measures

The majority of the resources identified within the Proposed Project APE are built environment structures, with the exception of the multi-compound archaeological site P-13-008653/CA-IMP-

8050 which are proposed to be avoided via project design and construction approach. However, there is the possibility of impacting inadvertent discoveries of buried archaeological deposits during construction, which would have potentially significant impacts. The mitigation measures outlined below have been designed to fulfill the requirements of Section 106 of the NHPA and CEQA guidelines. IID, in coordination with Reclamation, will be the lead agency implementing cultural resource mitigation measures and will provide information to Reclamation for their ongoing Section 106 oversight and consultation obligations.

MM-CR-1 Cultural Resources Avoidance and Monitoring

Prior to Start of Construction, IID will

1. Retain a Qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for archeology to oversee the execution of all mitigation measures related to archaeological and historic resources;
2. Preserve in place, via avoidance of resources, the archaeological sites identified; IID shall establish a 300-foot environmentally sensitive area with a maximum encroachment of 250-feet for barrier fencing for the protection of the archaeological sites;
3. Extend an invitation to the interested and affiliated tribes to be present during ground-disturbing activities that are proposed to occur on federal lands;
4. Conduct a Worker's Environmental Awareness Program (WEAP) training for archeological sensitivity and tribal cultural sensitivity for construction personnel for any ground disturbing activities on federal land;
5. If archaeological resources are encountered during ground-disturbing activities, the stipulations of 36 CFR 800.13(b)(3) and 36 CFR 800.13(c) shall apply. All activities within the immediate area of the discovery shall cease and measures shall be taken to secure and protect the discovery. Immediate telephone notification shall be made to the Environmental Group Manager at the Reclamation's Yuma Area Office (928) 343-8100. The activity may resume only after Reclamation has authorized a continuance.

MM-CR-2 Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

1. **Notification** – the Qualified Archaeologist shall notify IID and Reclamation immediately, followed by a call to the Medical Examiner.
2. **Isolate Discovery**- Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner.
3. **Field Examination** - If a field examination is not warranted, the Medical Examiner will determine with input from Reclamation, if the remains are or are most likely to be of Native American origin.
4. **Native American Human Remains** - If human remains **ARE** determined to be Native American:

    f. The Medical Examiner will notify the NAHC within 24 hours;

    g. NAHC will immediately identify the person or persons determined to be the Most Likely Descendant (MLD) and provide contact information;

    h. The MLD will contact the Qualified Archaeologist within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Code;

    i. The MLD will have 48 hours to make recommendations to IID and Reclamation, for the treatment or disposition with proper dignity, of the human remains and associated grave goods;

    j. Disposition of Native American Human Remains will be determined between the MLD and the Qualified Archaeologist if NAHC is unable to identify MLD.

5. **Not Native American Human Remains** - If Human Remains are **NOT** Native American, the Qualified Archaeologist will contact the Examiner and notify them of the historic era context of the burial; the Medical Examiner will determine appropriate course of action (PRC 5097.98)

4.3.6 Level of Significance After Mitigation

With incorporation of **MM-CR-1** and **MM-CR-2**, outlined in Section 4.3.5, Mitigation Measures, the Proposed Project would not result in significant impacts to any historical or archaeological, cultural resources.

4.4 HAZARDS AND HAZARDOUS MATERIALS

This section describes the existing hazardous materials within the vicinity of the project site, identifies associated regulatory requirements, evaluates potential impacts regarding hazards and hazardous materials, and identifies mitigation measures related to implementation of the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project).

4.4.1 Existing Conditions

As defined in the California Health and Safety Code Section 25501, "hazardous material" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant hazard to human health and safety, or to the environment, if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons, or harmful to the environment, if released into the workplace or the environment. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or is being stored prior to proper disposal.

In some cases, past industrial or commercial activities on a site may have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. If improperly handled, hazardous materials and wastes can cause public health hazards when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a chemical agent include inhalation, ingestion, bodily contact, and injection. Exposure can come as a result of an accidental release during transportation, storage, or handling 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.

A review of available maps, historical aerial photographs, and the DTSC EnviroStor website was completed on the project site. The Project site has been used for agricultural cultivation since at least 1996 and is either currently fallow or being used for that purpose. Besides the historical use of pesticides on the site, no other hazardous materials were observed on the proposed site. DTSC's EnviroStor website identified no hazardous sites and facilities within a 7-mile radius of the site.

4.4.2 Relevant Plans, Policies, and Ordinances

Federal

The Resource Conservation and Recovery Act of 1976 as amended by the Hazardous and Solid Waste Amendments of 1984

Federal hazardous waste laws are generally promulgated under the Resource Conservation and Recovery Act (RCRA) of 1976, as amended. These laws provide for the cradle-to-grave regulation of hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of.

The EPA has the primary responsibility for implementing the RCRA; however, individual states are encouraged to seek authorization to implement some or all RCRA provisions. California received authority to implement the RCRA program in August 1992. DTSC is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the Hazardous Waste Control Law. Under the Certified Unified Program Agency program, DTSC has in turn delegated enforcement authority to the Health and Human Services Agency.

Hazardous Materials Transportation Act

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the Code of Federal Regulations. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. These agencies also govern permitting for hazardous materials transportation.

Uniform Fire Code

The Uniform Fire Code (UFC), created by the National Fire Protection Association, is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The UFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The UFC and the Uniform Building Code use a hazard classification system to determine what protective measures are required to protect against structural fires. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, UFC employs a permit system based on hazard classification. The UFC is updated every 3 years.

State

California Occupational Safety and Health Administration

The California OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. CalOSHA standards are generally more stringent than federal regulations. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 330 et seq.). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

California Government Code Section 65962.5(a), Cortese List

The Hazardous Waste and Substance Sites (Cortese) List is a planning document used by the state, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code Section 65962.5 requires that the California EPA develop an updated Cortese List at least annually. DTSC is responsible for a portion of the information contained in the Cortese List. Other state and local government agencies are required to provide additional hazardous materials release information for the Cortese List.

Title 22 of the California Code of Regulations Chapter 6.5

DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the RCRA and the California Hazardous Waste Control Law. Both laws impose cradle-to-grave regulatory systems for handling hazardous waste in a manner that protects human health and the environment. The California EPA has delegated some of its authority under the Hazardous Waste Control Law to county health departments and other Certified Unified Program Agencies.

California Fire Code

The California Fire Code (CFC) is found in Chapter 9 of Title 24 of the California Code of Regulations. It was created by the California Building Standards Commission and is based on the International Fire Code created by the International Code Council. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to ensure fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

Senate Bill 1889, Accidental Release Prevention Law

Senate Bill 1889 required California to implement a new federally mandated program governing the accidental airborne release of chemicals promulgated under Section 112 of the Clean Air Act (42 USC 7412). Effective January 1, 1997, the California Accidental Release Prevention Law (CalARP) replaced the previous California Risk Management and Prevention Program and incorporated the mandatory federal requirements. CalARP addresses facilities that contain specified hazardous materials, known as "regulated substances," which, if involved in an accidental release, could result in adverse off-site consequences. CalARP defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

Local

County of Imperial General Plan

The County of Imperial General Plan Seismic and Public Safety Element (County of Imperial 1997) contains an implementation program to reduce the threat of seismic and public safety hazards within the unincorporated areas of the County. Implementation programs and policies are divided into three major topics: Seismic/geological hazards, flood hazards, and IID lifelines. The Seismic and Public Safety Element also contains a set of goals and objectives for land use planning and safety, emergency preparedness, and the control of hazardous materials. The goals and objectives, together with the implementation programs and policies, are the statements that will provide direction for private development.

Imperial County Office of Emergency Services – Emergency Operations Plan

The Imperial County Fire Department is the local Office of Emergency Services (OES) in Imperial County. The OES Coordinator is the County Fire Chief, who is assisted by an Assistant OES Coordinator. The Coordinator maintains the OES program for the County of Imperial. The Imperial County Fire Department acts as the lead agency for the Imperial County Operational Area and provides leadership in all phases of developing the emergency management organization, including public education, training, emergency operations center operations, interagency coordination, and plan development (Imperial County OES 2007). The Imperial County Operational Area Emergency Operations Plan provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental, or conflict-related risks that produce situations requiring coordinated response. It further provides guidance regarding management concepts relating to response and abatement of various emergency situations, identifies organizational structures and relationships, and describes responsibilities and functions necessary to protect life and property. The Emergency Operations Plan is consistent with the requirements of the Standardized Emergency Management

System as defined in Government Code Section 8607(a) and the U.S. Department of Homeland Security National Incident Management System for managing response to multi-agency and multijurisdictional emergencies. The Standardized Emergency Management System/National Incident Management System incorporates the use of the Incident Command System, mutual aid, the operational area concept, and interagency coordination (Imperial County OES, 2007).

4.4.3 Issues of Concern with No Applicable Criteria

Valley Fever

Valley Fever is an illness caused by a fungus (*Coccidioides immitis* and *C. posadasii*) that grows in soils under certain conditions. Favorable conditions for the Valley Fever fungus include low rainfall, high summer temperatures, and moderate winter temperatures. Soils within the Imperial Valley, including the Project site, fit the profile to harbor Valley Fever spores. When soils are disturbed by the wind or other activities such as construction and farming, Valley Fever fungal spores become airborne. The spores present a potential health hazard when inhaled. Individuals in occupations such as construction, agriculture, and archaeology have a higher risk of exposure due to working in areas of disturbed soils which may have the Valley Fever fungus. Infection risk is highest in California during the 6-month period from June to November. Animals are also susceptible to the disease. In extreme cases, the disease can be fatal, though the majority of Valley Fever cases are very mild, with over 60% of infected people having no symptoms or flu-like symptoms (BLM 2010). The County has a relatively low Valley Fever incidence rate of less than five cases for every 100,000 people (CDPH 2023).

4.4.4 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to hazards and hazardous material would occur if the project would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
2. 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.
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

4. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
5. 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 for people residing or working in the project area.
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.4.5 Impacts Analysis

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The Proposed Project site is adjacent to an Area of Critical Environmental Concern owned by BLM. The Project consists of a single basin reservoir facility covering approximately 440 acres, with a capacity of 2,100 acre-feet which would manage up to approximately 365,000 acre-feet of water annually. The water managed in the proposed reservoir would then gravity flow into the East Highline Canal, one of three main canals that branch off the AAC, a facility owned by Reclamation, serving IIDs water service area and managed and operated by the district. The Proposed Project also includes an approximately 2-mile intake channel, which would branch off the east side of the existing AAC Reach to convey the operational water flows through culverts and through an open channel up to the proposed reservoir at a flow rate of up to 1,500 cubic feet per second.

Construction

Less-Than-Significant Impact with Mitigation. Construction of the Project would involve the excavation of reservoir basin covering approximately 440 acres, with a ground level depth of up to 5 feet on the existing, fallow farm ground, using equipment such as backhoes, loaders, excavators, and graders, and using water trucks to control dust. As such, construction of the Proposed Project would entail routine transport of materials potentially hazardous to humans, wildlife, and sensitive environments. These potentially hazardous materials include gasoline, oil, solvents, and various other liquids and materials required for the operation of construction equipment. All contractors are required to comply with applicable laws and regulations regarding hazardous materials and hazardous waste management and disposal. Direct impacts to human health and biological resources from accidental spills of small amounts of hazardous materials from

construction equipment could potentially occur because of the Proposed Project. However, the Proposed Project would comply with federal, state, and local health and safety requirements that are intended to minimize hazardous materials risk to the public, such as CalOSHA requirements, the Hazardous Waste Control Act, CalARP, and the California Health and Safety Code.

In addition, all construction waste, including trash, litter, garbage, solid waste, petroleum products, and any other potentially hazardous materials would be removed and transported to a permitted waste facility for treatment, storage, and/or disposal. A stormwater pollution prevention plan will be prepared prior to project construction to comply with the Construction General Permit (State Water Resources Control Board Order 2009-0009-DWQ, as amended). Among other things, the stormwater pollution prevention plan requires that hazardous materials be properly stored, contained, and disposed of to prevent polluted stormwater from being discharged from the site (see Section 4.5, Hydrology and Water Quality).

Due to the Project site being previously used for agriculture, there is the potential to expose previously used pesticides and herbicides. With implementation of **Mitigation Measure (MM) HAZ-1** through **MM-HAZ-3** and **MM-AQ-1** (an enhanced dust control plan), proper use and disposal of hazardous materials would not pose a significant risk to the public and the environment.

Valley Fever

Construction of the Proposed Project would occur in an area favorable to the growth of Valley Fever, a fungus that grows in soils in areas of low rainfall, high summer temperatures, and moderate winter temperatures. Project construction would disturb the soil and may cause the fungal spores to become airborne, potentially putting construction personnel and wildlife at risk of contracting Valley Fever. Imperial County has a relatively low Valley Fever incidence rate. Data as of September 2023 indicated that there were less than five cases in 2021 (CDPH 2023). Implementation of an enhanced dust control plan and the provisions of ICAPCDs Regulation VIII identified to reduce particulate matter less than 10 microns in diameter (PM_{10}) (**MM-AQ-1** and **MM-AQ-2**) under Air Quality mitigation measures, would be effective in reducing airborne dust. Implementation of these measures would minimize the spread of fungal spores, thereby reducing the potential for contracting Valley Fever during construction.

Operations

Less-Than-Significant Impact. The operational phase of the Proposed Project primarily involves the storage of up to approximately 2,100 acre-feet of water received by gravity flow from an intake structure off the east side of the AAC Reach. The reservoir would be unmanned, however, routine maintenance would be undertaken by the IID in accordance with existing practices for inspections and repair. Operations would not include the treatment of the water and no chemicals would be

used during operations. The maintenance activities would not include the routine transport, use, or disposal of hazardous materials. Occasional maintenance activities, like for inspections and repair, would be made via crew trucks using existing road infrastructure. Maintenance activities would be in compliance with all current local, state, and federal regulations listed above in the construction discussion. Impacts related to operations of the project would be less than significant. No impacts associated with exposure to Valley Fever are anticipated during operations and maintenance, given that no earthmoving is proposed and the reservoir is an unmanned facility with minimal vehicle trips anticipated while operational, thereby minimizing dust levels.

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?

Construction

Less-Than-Significant Impact with Mitigation. Improper disposal of hazardous materials during construction may cause an accidental release of hazardous materials into the environment. As discussed under threshold 1, the Proposed Project site was historically used for agricultural production. Similarly, **MM-HAZ-1** through **MM-HAZ-3** and **MM-AQ-1 and MM-AQ-2** would reduce the potential for significant impacts related to the release of hazardous materials. As such, construction impacts would be reduced to less-than-significant impacts with mitigation incorporated.

Operations

Less-Than-Significant Impact. Operations of the Proposed Project include an unstaffed operational reservoir and intake channel but does incorporate emergency generators that are to be stored in enclosed structures. Compliance with standard California Department of Pesticide Regulation practices to inspect equipment for leaks and promptly respond to any minor spill of fuel or oil would ensure that the potential impact of the Proposed Project is less than significant.

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?

No Impact. Operations of the Proposed Project include an unstaffed operational reservoir and intake channel. The Proposed Project site is not located within one-quarter mile of an existing or proposed school. The closest school to the Proposed Project site is Emmett S. Finley Elementary School, located approximately 7.5 miles to the northwest. Therefore, the Proposed Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. No construction or operational impacts would occur.

Would the project be located on a site that 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?

No Impact. The Proposed Project site is not designated as a hazardous materials site on the Cortese List, and is not included on any state or federal list of potentially hazardous materials (DTSC 2021). There are no sites within 1,000 feet of the Proposed Project site mapped on the DTSC's EnviroStor database (DTSC 2021). Therefore, the Proposed Project would have no impact related to location on a listed hazardous materials site.

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 for people residing or working in the project area?

No Impact. The Proposed Project is not located within 2 miles of a public airport or public use airport. The nearest operating public airport is the Calexico International Airport, 13.7 miles southwest of the Proposed Project site. Therefore, no impact would occur.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. Under the Proposed Project, local building codes would be followed to minimize flood, seismic, and fire hazard. Thus, the Proposed Project would not impair the implementation of, or physically interfere with, the Imperial County Operational Area Emergency Operations Plan. Therefore, no impacts would occur.

Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Less-Than-Significant Impact. CAL FIRE adopts Fire Hazard Severity Zone maps for State Responsibility. According to the Fire Hazard Severity Zone Map there are no zones within the Project area or vicinity nor classified as Moderate, High or Very High fire hazard risks for the Imperial County State Responsibility Area adopted in 2007 and the site is located within a local responsibility area. The California Department of Forestry and Fire Protection (CAL FIRE) identifies the Proposed Project site and surrounding local responsibility areas as having a moderate risk for fire danger. The Proposed Project site and surrounding areas would be serviced by fire protection agencies, including the Imperial County Fire Department. Construction activities would comply with local standards which minimize fire risk related to construction activities. Operations of the Proposed Project would consist of a reservoir and intake channel, and would not introduce any people or residences to the area. As such, it is unlikely that the Proposed Project would 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. Therefore, impacts would be less than significant.

4.4.6 Mitigation Measures

Implementation of the following mitigation measures would reduce identified impacts related to hazards and hazardous materials to less than significant:

MM-HAZ-1 Soil sampling shall be implemented prior to construction activities. Due to past uses for agriculture, prior to grading activities, soil shall be sampled and analyzed for metals and residual pesticides. Sampling shall be conducted in accordance with California DTSC guidance documents. The soil testing will confirm the presence or absence of on-site contamination associated with past uses on the project site. Any soils qualifying as hazardous waste shall delineated, removed, and properly disposed of off-site. Any soil that exceeds the California Human Health Screening Levels shall be either remediated on site to levels protective of human health or removed and properly disposed of off-site. Should contaminants be identified, a qualified Reclamation Hazardous Materials Specialist for the project shall be retained to ensure appropriate remediation is conducted and completed in accordance to the regulations specific to the contaminants identified.

MM-HAZ-2 A hazardous materials contingency plan shall be developed and followed during demolition, excavation, and construction activities for the Project. Site workers shall be familiar with the hazardous materials contingency plan and should be fully trained on how to identify suspected contaminated soil. The hazardous materials contingency plan shall include, at a minimum, the following:

- Identification of known areas with hazardous waste and hazardous materials of concern
- Procedures for temporary cessation of construction activity and evaluation of the level of environmental concern
- Procedures for restricting access to the contaminated area except for properly trained personnel
- Procedures for notification and reporting, including internal management and local agencies (e.g., Imperial County Fire Department, Imperial County Public Health Division), as needed
- Health and safety measures for removal and excavation of contaminated soil
- Procedures for characterizing and managing excavated soils

- Procedures for certification of completion of remediation

MM-HAZ-3 Material Storage During Construction. During construction, if aggregate aboveground oil/fuel storage capacity is greater than 1,320 gallons (or completely buried 42,000 gallons) and there is a reasonable expectation of an oil discharge into or upon navigable waters of the United States, a spill prevention, control, and countermeasures (SPCC) plan pursuant to 40 CFR 112 (or, for small quantities, a spill prevention and response plan) shall be prepared prior to and implemented during construction. The SPCC plan (or spill prevention and response plan) shall identify best management practices for spill and release prevention and provide procedures for cleaning up and disposing of any spills or releases.

4.4.7 Level of Significance After Mitigation

With implementation of **MM-HAZ-1** through **MM-HAZ-3** and **MM-AQ-2**, impacts related to hazards and hazardous materials would be less than significant.

4.5 HYDROLOGY AND WATER QUALITY

This section describes the existing hydrology and water quality associated with the project site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project).

4.5.1 Existing Conditions

The Proposed Project is located in a desert climate with no present or seasonal streams or rivers on or near the project site. The County only receives an average of less than 3-inches of rainfall annually (U.S. Climate Data 2018). As such, any surface runoff on the project site would drain to shallow depths and evaporate.

According to the County General Plan's Water Element, groundwater within the Imperial Valley is stored in the Pleistocene sediments of the Valley floor, the mesas on the west, and the East Mesa and sand hills on the east. However, the fine-grained lake sediments in the principal portion of the Imperial Valley inhibit groundwater movement, and tile-drain systems are required to dewater the sediments to a depth below the root zone of crops and to prevent the accumulation of saline water on the surface. Few wells have been drilled in these lake sediments because the yield is poor and the water is generally saline. The few wells in the County are for domestic use only. Groundwater in the Imperial Valley is of poor quality and is generally unsuitable for domestic or irrigation purposes (IID 2021).

The Project site is not located within a 100-year flood hazard area, nor is the site located in the Imperial Dam inundation area, Laguna Dam inundation area, or Senator Wash Dam inundation area, because all of these areas are more than 45 miles away from the project site (County of Imperial 1997; DWR 2016). The project site is approximately 108 miles inland (east) from the Pacific Ocean and 35 miles southeast from the Salton Sea.

4.5.2 Relevant Plans, Policies, and Ordinances

Federal

Clean Water Act

The Clean Water Act (CWA; 33 USC 1251 et seq.), as amended by the Water Quality Act of 1987, is the major federal legislation governing water quality. The objective of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Key sections of the act are as follows:

- **Sections 303 and 304** provide for water quality standards, criteria, and guidelines. Under Section 303(d) of the CWA, the State of California is required to develop a list of impaired

water bodies that do not meet water quality standards and objectives and establish total maximum daily levels (TMDLs) for each pollutant/stressor. The water quality impairments relevant to the Proposed Project are discussed above in Section 4.5.1.

- **Section 401 (Water Quality Certification)** requires an applicant for any federal permit that proposes an activity which may result in a discharge to waters of the United States, to obtain certification from the state that the discharge will comply with other provisions of the act. The Project area does not support any wetlands under the jurisdiction of the U.S. The AAC, however, is within federal jurisdiction but has been issued an exemption from the USACE. It is not anticipated that the Proposed Project will require a Section 401 water quality certification. Project discussion on jurisdictional waters are addressed in Section 4.2, Biological Resources, of this Draft EIR.
- **Section 402** establishes the NPDES, a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the SWRCB and the nine RWQCBs, who have several programs that implement individual and general permits related to construction activities, stormwater runoff quality, and various kinds of non-stormwater discharges. The Proposed Project will be in compliance with CWA Section 402, as discussed in the impacts analysis in Section 4.5.4.
- **Section 404** establishes a permit program for the discharge of dredged or fill material into waters of the United States. This permit program is jointly administered by the U.S. Army Corps of Engineers and the EPA. USACE has issued a "No Permit Required" for the Proposed Project, pursuant to 33 CFR 323.4 (a)(1)(i). Discussion on jurisdictional waters are addressed in Section 4.2, Biological Resources, of this Draft EIR.

Numerous agencies have responsibilities for administration and enforcement of the CWA. At the federal level this includes the EPA and the USACE. At the state level, with the exception of tribal lands, the California EPA and its sub-agencies, including the SWRCB, have been delegated primary responsibility for administering and enforcing the CWA in California.

State

Porter–Cologne Water Quality Control Act

The Porter–Cologne Water Quality Control Act (Porter–Cologne Act; codified in the California Water Code, Section 13000 et seq.) is the primary water quality control law for California. Whereas the CWA applies to all waters of the United States, the Porter–Cologne Act applies to waters of the state,[10] which includes isolated wetlands and groundwater in addition to federal

[10] "Waters of the state" are defined in the Porter–Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code, Section 13050(e)).

waters. It is implemented by the SWRCB and the nine RWQCBs. In addition to other regulatory responsibilities, the RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the state could cause pollution or nuisance, including impacts to public health and the environment.

The act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. California Water Code, Section 13260, subdivision a, requires that any person discharging waste or proposing to discharge waste, other than to a community sewer system, that could affect the quality of the waters of the state, must file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States), an NPDES permit is required, which is issued under both state and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the state (such as groundwater and isolated wetlands), WDRs are mandatory and are issued exclusively under state law. WDRs typically require many of the same best management practices (BMPs) and pollution control technologies as required by NPDES-derived permits.

Regional Water Quality Control Board

The nine RWQCBs throughout California adopt and implement Basin Plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The Proposed Project is located within Region 7, the Colorado River Basin RWQCB region. The Colorado River Basin RWQCB Basin Plan must conform to the policies set forth in the Porter–Cologne Act. The Porter–Cologne Act also provides the RWQCBs with authority to include within their Basin Plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), passed in September 2014, is a comprehensive three-bill package that provides a framework for the sustainable management of groundwater supplies by local authorities. The SGMA requires the formation of local groundwater sustainability agencies (GSAs) to assess local water basin conditions and adopt locally based management plans. Local GSAs were required to be formed by June 30, 2017. The SGMA provides 20 years for GSAs to implement plans and achieve long-term groundwater sustainability and protect existing surface water and groundwater rights. The SGMA provides local GSAs the authority to (1) require registration of groundwater wells; (2) measure and manage extractions; (3) require reports and assess fees; and (4) request revisions of basin boundaries, including establishing new sub-basins. Furthermore, under the SGMA, GSAs responsible for high- and

medium-priority basins were required to adopt groundwater sustainability plans within 5 to 7 years of 2015, depending on whether the basin is in critical overdraft. The California Department of Water Resources (DWR) has designated the Imperial Valley Basin, which the County overlies, as very low priority and not in critical overdraft (DWR 2021).

Lake or Streambed Alteration Agreement

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the law requires the proponent of a project that may impact a river, stream, or lake to notify the CDFW before beginning the Proposed Project. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 of the California Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or use materials from a streambed, to notify CDFW before beginning the Proposed Project. Similarly, under California Fish and Game Code Section 1602, before any state or local governmental agency or public utility begins a construction project that will (1) divert, obstruct, or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake, it must first notify CDFW of the Proposed Project. If CDFW determines that the Proposed Project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required.

California Environmental Quality Act Guidelines

The California Environmental Quality Act (CEQA) Guidelines (Appendix G) establish thresholds for hydrology and water quality impact analysis.

Local

County of Imperial General Plan

The County General Plan serves as the blueprint for growth and development in the unincorporated County. It is based on a set of guiding principles and consists of the following elements: Land Use, Circulation & Scenic Highways, Agriculture, Conservation & Open Space, Renewable Energy & Transmission, Housing, Noise, Seismic & Public Safety, Water, and Parks. The purpose of the Water Element is to provide water conservation measures, programs, and policies that will continue to efficiently utilize the County's water resources. The Water Element includes programs

that work toward providing an adequate domestic water supply, protect surface waters, provide adequate agricultural irrigation water supply, protect water resources from hazardous materials, and coordinate water management.

4.5.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts related to hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to hydrology or water quality would occur if the project would:

1. Violate any water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality.
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, through the addition of impervious surfaces in a manner which would:
    a. Result in substantial erosion or siltation on- or off-site.
    b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
    c. 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
    d. Impede or redirect flood flows.
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
5. Conflict with or obstruct implementation of a water quality control plan or sustainable management plan.

4.5.4 Impacts Analysis

Would the project violate any water quality standards or waste discharge requirements or otherwise degrade surface or groundwater quality?

Less-Than-Significant Impact. The Proposed Project includes the construction of an off-line reservoir on a parcel of agricultural land, planned to manage fluctuating downstream water demands. The Project would temporarily redirect a portion of Colorado River supplies through the proposed intake channel and to the reservoir. The area's groundwater quality in the area is very poor and unsuitable for domestic or irrigation use due to high levels of total dissolved solids and of fluoride and boron concentrations. Salinity levels range from hundreds to an extreme of up to tens of thousands of milligrams per liter.

Construction of the Proposed Project could create the potential for erosion during excavation. However, construction activities would be subject to applicable requirements of the Colorado River Basin RWQCB with respect to control of surface erosion, sedimentation, and runoff quality. Additionally, accidental release, through mishap or improper maintenance of equipment, of fuels, oils, lubricants, and other hazardous substances used during construction may impact surface water quality or WDRs. Further, to prevent accidental releases, the Proposed Project would be required to comply with the NPDES SWRCB Construction General Permit Order No. 2009-0009-DWQ (Construction General Permit) for stormwater discharges and general construction activities, and incorporate standard BMPs such as regular cleaning or sweeping of construction areas and impervious areas, and various stormwater BMPs. A water management plan must describe the type, location and function of structural measures to alleviate stormwater impacts and must demonstrate that the combination of measures selected are adequate to meet the discharge prohibitions, effluent standards, and receiving water limitations contained in the Construction General Permit. This would ensure that construction impacts would be less than significant. As such, through compliance with construction regulations, impacts to water quality and WDRs would be less than significant.

As previously stated, the project would be subject to implementation of the Construction General Permit for stormwater discharges and general construction activities, including preparation of a water quality management plan, and BMPs, as well as compliance with local grading ordinances, would minimize construction impacts on water quality. Therefore, short-term construction impacts associated with the degradation of water quality would be less than significant.

Operation of the Proposed Project would include an unstaffed lined operational reservoir and intake channel, so the Proposed Project would not violate water quality standards or WDRs. No groundbreaking activities would occur during operations of the Proposed Project. Operations of the Proposed Project include the directing of water to the proposed reservoir and then to the EHL Canal. No impacts to water quality would result from operations, as the Proposed Project would provide lined facilities to convey water generally in the same manner as existing facilities. The proposed reservoir and intake channel would be lined. Therefore, the water flowing through the proposed intake channel and reservoir would be unaffected by the adjacent soils. Compliance with all applicable federal, state, and local stormwater requirements would avoid impacts associated with long-term operational impacts.

Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

No Impact. The Proposed Project would not use local groundwater supplies for construction or operation. There are no groundwater recharge areas within or in close proximity to the project site. Construction of the proposed reservoir and intake channel would require soil excavation of

approximately 5 feet below ground surface. Groundwater would not be affected at this depth. Any amount of water used for construction would be surface water delivered through the Imperial Irrigation District (IID) conveyance system. The Proposed Project would convey and manage surface water only. The proposed reservoir and intake channel would be lined. Therefore, water flowing through the proposed intake channel and proposed reservoir would not seep into the underlying soils to reach groundwater. Therefore, construction and operations of the Proposed Project would not interfere with groundwater resources or local groundwater recharge. No construction or operational impacts to groundwater would occur.

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, through the addition of impervious surfaces in a manner which would:

i. result in substantial erosion or siltation on- or off-site?

No Impact. Operations of the Proposed Project would consist of a main canal off-line operational reservoir and intake channel. A proposed intake channel off the east side of the East Highline Canal would direct Colorado River water supplies through the proposed intake channel to the proposed reservoir. The existing canals and drainage infrastructure affected by the Project are human-made and would not be considered part of the natural drainage pattern for the area. The existing canal infrastructure is not a stream or river and no streams or rivers are located on or near the area of the Proposed Project site. The Proposed Project site is located in a desert climate with no perennial or seasonal streams or rivers on or near the Proposed Project site. The Proposed Project site consists of flat agricultural land, with human-made tile drainage lines installed approximately 8 to 12 feet below ground surface to route agricultural runoff to IID's existing drainage system, and semi-disturbed desert areas, in which surface runoff would drain to shallow depths and evaporate. Therefore, the construction and operations of the Proposed Project would not alter existing drainage patterns on or near the Proposed Project site and would not result in substantial erosion or siltation on or off-site. Therefore, no impact would occur because of the Proposed Project.

ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

No Impact. As previously stated, the Proposed Project would consist of a main canal off-line operational reservoir and an intake channel off the east side of the East Highline Canal, which would direct Colorado River water supplies through the proposed intake channel to the proposed reservoir. However, the existing canals and drainage infrastructure in the Project area are human-made and would not be considered part of the natural drainage pattern for the area. The Proposed Project site is located in a desert climate with no present or seasonal streams or rivers on or near

the Proposed Project site. The County only receives approximately 3-inches of rainfall annually (U.S. Climate Data 2018). Thus, any surface runoff on the Proposed Project site would drain to IID's existing human-made drainage system or to shallow depths and evaporate. Therefore, the Proposed Project would not increase the rate or amount of surface runoff in a manner that would result in flooding on or off-site. Therefore, no impact would result from the Proposed Project.

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?

No Impact. The Proposed Project would consist of a main canal off-line operational reservoir and intake channel. The proposed reservoir and intake channel would be lined. The County only receives an average of less than 3-inches of rainfall annually (U.S. Climate Data 2018). Any precipitation to occur on the Proposed Project site would be minimal and managed on site by draining to IID's existing human-made drainage system or to shallow depths and evaporating. Thus, the Proposed Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems. Therefore, no impact would result from the Proposed Project.

iv. Impede or redirect flood flows?

No Impact. According to Flood Insurance Rate Map Number FM06025C2125C, the California Department of Water Resources, and the County General Plan, the Proposed Project site is not located within a 100-year flood hazard area (DWR 2016; FEMA 2016; County of Imperial 1997, Figure 4). Therefore, the project would not alter flood flows.

In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?

No Impact. The Proposed Project site is approximately 108 miles inland from the Pacific Ocean and would not be subject to inundation by tsunami or seiche. Given that the Proposed Project site is not located near a large standing body of water (the nearest is the Salton Sea, approximately 35 miles away), the risk of inundation by seiche (or standing wave) is negligible. In addition, the Proposed Project site is generally flat with no steep slopes and does not contain slopes subject to potential landslide or mudflows. Therefore, no impact would occur related to inundation by seiche, tsunami, that would risk the release of pollutants.

Conflict with or obstruct implementation of a water quality control plan or sustainable management plan?

No Impact. The Proposed Project would comply with the NPDES SWRCB Construction General Permit Order No. 2009-0009-DWQ (Construction General Permit) for stormwater discharges and general construction activities, and incorporate standard BMPs such as regular cleaning or sweeping

of construction areas and impervious areas, and various stormwater BMPs. A water management plan must describe the type, location and function of structural measures to alleviate stormwater impacts and must demonstrate that the combination of measures selected are adequate to meet the discharge prohibitions, effluent standards, and receiving water limitations contained in the Construction General Permit. Implementation of a SWPPP and a Drainage and Grading Plan would ensure the Project would implement standard industry BMPs and relevant Basin BMPs to control off-site discharges and no violation of water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality. Additionally, the Proposed Project would not use local groundwater supplies for construction or operation. There are no groundwater recharge areas within or in close proximity to the project site.

4.5.5 Mitigation Measures

As discussed in the impacts analysis provided in Section 4.5.4, the Proposed Project would not result in a significant impact related to hydrology and water quality during construction or operation. Therefore, no mitigation is required.

4.5.6 Level of Significance After Mitigation

Impacts would be less than significant with compliance with applicable permits; therefore, no mitigation is required.

4.6 TRIBAL CULTURAL RESOURCES

This section describes the existing tribal cultural resources inventory of the proposed EHL Reservoir and Intake Channel Project (Proposed Project or Project) site, identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures related to implementation of the Proposed Project. The analysis herein is based on the cultural resources assessment prepared for the Proposed Project and included as Appendix D to this Draft EIR.

4.6.1 Existing Conditions

The area of potential effect (APE) includes the footprint of the proposed reservoir and a 300-foot ROW to contain the intake channel all of which is proposed to be located within an APE corridor up to 550-feet in width. Immediately east of the basin area APE is the ACEC, managed by BLM. All Proposed Project activities would avoid the ACEC.

The Project site is located within the Sonoran Desert, bounded on the west by the Peninsular Ranges and bounded on the east by the Colorado River. The reservoir portion of the APE is located entirely within agricultural fields, but the intake channel extends south, bisecting earthworks, including irrigation drains and federal land, before it reaches the AAC Reach. The APE elevation does not vary greatly and averages approximately 35 feet above mean sea level. The APE is dominated by levelled agricultural land and linear earthworks; however, there is a section of disturbed desert federal land that is bisected by the intake channel. There is a communication tower, All-American Drain 2/2A and numerous access dirt roads that dominate this area managed by Reclamation.

4.6.1.1 Tribal Cultural Setting

As discussed in Appendix D, there are a number of Tribes that were identified to be culturally affiliated to the project area. The affiliated Tribes identified by the NAHC in 2017 included: Barona Group of the Capitan Grande, Campo Kumeyaay Nation, Cocopah Indian Reservation, Ewiiaapaayp Band of Kumeyaay Indians, Iipay Nation of Santa Ysabel, Inaja Band of Mission Indians, Jamul Indian Village of California, Kwaaymii Laguna Band of Mission Indians, La Posta Band of Diegueno Mission Indians, Manzanita Band of Kueyaay Nation, Mesa Grande Band of Mission Indians, San Pasqual Band of Mission Indians, Sycuan Band of the Kumeyaay Nation, Sycuan Band of the Kumeyaay, and Viejas

Band of Kumeyaay. Quechan Indian Tribe reached out to Reclamation and IID in the summer of 2020 requesting to be recognized as an affiliated Tribe.

4.6.1.2 Methodology

In preparation of the cultural resources inventory report prepared for the Proposed Project, an inventory of all resources within the Proposed Project APE was compiled to determine possible impacts or potential effects to cultural and Tribal cultural resources. The presence and significance of existing cultural and Tribal cultural resources associated with the Proposed Project were determined using the methodologies outlined below.

Archaeological/Cultural Resources

South Coastal Information Center Records Search

An examination of existing maps, records, and reports was conducted to determine if the Proposed Project could potentially impact previously recorded cultural resources. On January and February 2017, Dudek conducted a literature and records search of the original Study Area/original APE at the South Coastal Information Center (SCIC) at San Diego State University, including a 1-mile-wide buffer. An additional records search was completed by Rincon on March 17, 2021, to include the Proposed Project's intake channel alternative connecting at the AAC Reach and a 0.5-mile radius. The objective of these records searches was to determine whether prehistoric or historical cultural resources had been recorded previously within the original and expanded Study Area or vicinity to provide information regarding the sensitivity of the EHL Project APE for encountering cultural resources, including Tribal cultural resources. In addition to a review of previously prepared site records and reports, the records search also included a review of historical maps of the original APE and the Proposed Project APE, ethnographies, the NRHP, the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and Archaeological Determinations of Eligibility.

Survey

Though the Proposed Project APE has been previously inventoried, many of the previous studies are dated; thus, the entire APE was surveyed for the current study. The survey of the original Project APE was conducted between July 27 and 28, 2017, and between January 22 and 24, 2018. The reservoir portion of the original and Proposed Project APE consists entirely of agricultural land. The intake channel crosses earthworks including the All-American Drains 2 and 2A and a small segment of undeveloped, but disturbed desert land located between the All-American Drain 2 and SR-98 owned by Reclamation.

The original surveys in 2017 and 2018 prepared by Dudek were to compile an inventory of all resources within the original APE, specifically the reservoir basin footprint and original AAC Intake Channel Alternative that connected directly to the AAC, to determine potential effects to cultural and Tribal cultural resources. Rincon consultants conducted a pedestrian survey of the expanded Study Area in June of 2021 limited to a federally owned parcel for a possible intake channel alternative without a direct AAC connection but rather at the AAC Reach (now a part of the Proposed Project APE). The total Study Area reviewed by Dudek and Rincon includes approximately 780 acres while the Proposed Project APE is limited to the direct proposed Project footprint and APE of approximately 711 acres. See Section 4 of this Draft EIR or Appendix D for a more detailed description of survey areas.

All surveys were conducted using transect intervals spaced 15 meters and oriented generally from north to south. Exposed ground surfaces were examined for artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), ecofacts (marine shell and bone), soil discoloration that might indicate the presence of a cultural midden, soil depressions, and features indicative of the former presence of structures or buildings (e.g., standing exterior walls, postholes, foundations) or historical debris (e.g., metal, glass, ceramics). Ground disturbances such as burrows and drainages were also visually inspected. Survey accuracy was maintained using a handheld GPS unit and a georeferenced map of the Proposed Project APE. Site characteristics and survey conditions were documented using field records and a digital camera.

Tribal Cultural Resources

Native American Heritage Commission Sacred Lands File Search

A search of the NAHC Sacred Lands File was conducted for the Proposed Project APE on April 10, 2017. A search of this type requires NAHC staff to review their list for the presence of Native American sites, which are organized spatially based on a Public Land Survey System section grid (measuring 1 square mile). The NAHC response letter included a list of Native American group representatives who should be contacted for information about these sites. Outreach letters were mailed on August 23, 2017, to all Native American group representatives included on the NAHC contact list. These letters attempt to solicit additional information relating to Tribal cultural resources (TCRs) that may be affected by the Proposed Project. Native American representatives were requested to define a general area where known resources intersect the Proposed Project APE.

Under CEQA, the lead agency is required to perform formal government-to-government consultation with Native American Tribes under Assembly Bill 52. Thane Somerville of the Quechan Tribe of the Fort Yuma Indian Reservation requested via letter formal notification of any proposed project within the geographic boundaries of Imperial County and Southern Riverside

County pursuant to California Public Resources Code (PRC) Section 21080.3.1(b) (AB 52). On September 18, 2017, IID provided formal notification to the Quechan Tribe of the Fort Yuma Indian Reservation. On August 31, 2017, Ray Teran of the Viejas Band of Kumeyaay Indians stated via letter that the Proposed Project site has cultural significance or ties to the Viejas Band of Kumeyaay Indians. Although the presence of TCRs was not mentioned, Mr. Teran requested that a Kumeyaay cultural monitor be on site for ground-disturbing activities associated with the Proposed Project. An additional request for tribal monitoring were subsequently made by the Fort Yuma Quechan Indian Tribe (2020).

4.6.1.3 Results

Archaeological/Cultural Resources

South Coastal Information Center Records Search

As previously noted under Section 4.4, an examination of existing maps, records, and reports was conducted to determine if the Proposed Project could potentially impact previously recorded cultural resources, including Tribal cultural resources in 2017 and 2021 by Dudek Consultants and Rincon Consultants, respectively. The objective of these records searches was to determine whether prehistoric, historical and/or Tribal cultural resources had been recorded previously within the original and expanded Study Area or vicinity to provide information regarding the sensitivity of the Proposed Project APE for encountering cultural resources, including Tribal cultural resources. In addition to a review of previously prepared site records and reports, the records search also included a review of historical maps of the original APE and the Proposed Project APE, ethnographies, the NRHP, the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and Archaeological Determinations of Eligibility.

As previously noted, records searches conducted by Dudek (2017) and Rincon (2021) identified 38 previously identified cultural resources within a 0.5-mile to 1-mile radius of the APE (Appendix D). Of the 38 previously identified sites, one cultural resource is a multi-component archaeological site (P-13-008653/ CA-IMP-8050) located within the proposed EHL Reservoir Project APE. Multi-component archaeological site P-13-008653/CA-IMP-8050 is recommended eligible for inclusion on the NRHP; it will be affected by project activities. Aside from including a historical refuse scatter it also contains a prehistoric ceramic scatter (Dominici 2003a). The originally recorded ceramic scatter, located on the eastern portion of the site, included Colorado Buff Ware (post A.D. 1500) and Salton Buff, Tumco Buff, and Tizon Brown Wares from the Patayan II Period (A.D. 1000 to 1500) and Patayan III Period (A.D. 1500 to 1860). The site boundary for this resource was expanded due to Rincon's 2021 survey effort.

Survey

The entire Proposed Project APE was inventoried utilizing a pedestrian survey by Dudek (2017/2018 and Rincon 2021). Rincon Archaeologists conducted a pedestrian survey of the expanded Study Area on June 7 and June 10, 2021 limited to a federally owned parcel for a possible intake channel alternative without a direct AAC connection (Proposed Project).

The multi-component archaeological site (P-13-008653/ CA-IMP-8050) was relocated during the Rincon survey and is in a similar condition to its original recording; however, the survey identified an additional prehistoric ceramic scatter and historic-period refuse scatter north of the original site boundary. These additional scatters, were recorded as nine historic-period artifact loci and two prehistoric ceramic artifact loci. These additions will expand the previous site boundaries to encompass an area of approximately 246 meters (north-south) by 320 meters (east-west). The two prehistoric loci are noted below and described in more detail under Appendix D.

> **Locus 1**, located in the northeast corner of the original site boundaries, consists of a 52-meter (east-west) by 24-meter (north-south) prehistoric ceramic sherd scatter. This scatter represents the original ceramic sherd concentration recorded in 2003 updated with additional artifact counts and spatial data. This survey identified approximately 21 ceramic sherds distributed throughout the locus.
>
> **Locus 2**, located approximately 13-meters northwest of Locus 1, is an additional prehistoric ceramic scatter containing approximately 34 ceramic sherds. This concentration measures approximately 54- meters north-south by 40-east-west meters.

Two isolates were newly recorded within the Proposed Project APE. ISO-EHL-1 consisted of prehistoric properties, however, isolates are typically ineligible for NRHP listing.

P-13-018800 (ISO-EHL-1): Two prehistoric ceramic body sherds, one with heat fractures and a coarse grain temper, possibly Colorado Buff; the second with heat discoloration. Resource ISO-EHL-1 was subsumed into P-13-018800 by the SCIC; however, we maintain these are separate resources and should be treated accordingly. The SCIC did not consult with the recorder or provide reason for their action to subsume ISO-EHL-1 with P-13-018800.

P-13-018801 (ISO-EHL-2): Two crushed tins cans, one church key opened can (1934 to 1963), and one vent-hole can (post-1900) that measure 3 7/8 inches in height by 2 7/8 inches in diameter.

All of the Tribal cultural resources will be avoided by project design. A summary of all of the Tribal cultural resources identified within the Proposed Project APE are identified in Table 4.6-1.

Table 4.6-1
Previously and Newly Recorded Tribal Cultural Resources within Proposed Project APE

Site Number	Trinomial	Era	Description	NRHP/CRHR Eligibility
P-13-008653	CA-IMP-008050	Multi-component site	Prehistoric Ceramic and Historical Refuse scatters	Recommended Eligible
P-13-018800 (ISO-EHL-1)	CA-IMP-13489	Pre-Historic	Two Prehistoric Ceramic Sherds	Recommended Not Eligible

NRHP = National Register of Historic Places; CRHR = California Register of Historical Resources; APE = area of potential effect; — = no data.

4.6.2 Relevant Plans, Policies, and Ordinances

This Project is subject to federal, state, and local regulations regarding cultural resources as further detailed in Section 4.4 Cultural Resources of this Draft EIR. The following section provides a summary of any ***additional*** applicable regulations, policies, and guidelines relating to the proper management of Tribal cultural resources for this Project.

Federal (see Section 4.4.2, Cultural Resources/Relevant Plans, Policies, and Ordinances)

State (see Section 4.4.2, Cultural Resources/Relevant Plans, Policies, and Ordinances)

Native American Historic Cultural Sites (California Public Resources Code Section 5097 et seq.)

The Native American Historic Resources Protection Act (PRC, Section 5097, et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to one year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The act also provides a process for the identification and repatriation of these items to the appropriate Tribes.

California Environmental Quality Act

In 2014, CEQA was amended through Assembly Bill (AB) 52 to apply to "Tribal cultural resources" as well. Specifically, PRC, Section 21074 provides guidance for defining TCRs as either of the following:

A. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Cultural Resources. (B) Included in a local register of cultural resources as defined in subdivision (k) of §5020.1.

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 §5024.1. In applying the criteria set forth in subdivision (c) of §5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe. (b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

CEQA Guidelines Section 15064.5 also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are set forth in PRC Section 5097.98.

California Health and Safety Code Section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (California Health and Safety Code, Section 7050.5b). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (California Health and Safety Code, Section 7050.5c). The NAHC will notify the most likely descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Senate Bill 18

The Traditional Tribal Cultural Places Bill of 2004 (Senate Bill 18) requires local governments to consult with Native American Tribes during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. The purpose of this consultation is to protect the identity of the cultural place and to develop appropriate and dignified treatment of the cultural resource. The consultation is required whenever a general plan, general plan amendment, specific plan, specific plan amendment, or open space element is proposed for adoption. As part of the planning process, California Native American Tribes must be given the opportunity to consult with the lead agency for the purpose of preserving, mitigating impacts to, and identifying cultural places.

Assembly Bill 52

AB 52, which took effect July 1, 2015, establishes a consultation process between California Native American Tribes and lead agencies in order to address Tribal concerns regarding project impacts and mitigation to TCRs.

Local

Imperial County General Plan

The Conservation and Open Space Element of the Imperial County General Plan is the official conservation guide for all decision makers including the County Board of Supervisors, Planning Commission, Airport Land Use Commission, and various departments in addition to other federal, state, or county governmental decision-making bodies. It shall also identifies goals and policies to ensure the managed use of environmental and cultural resources. The goal and objective outlined below is included in section 4.4.2 (County of Imperial 2016).

> **Preservation of Cultural Resources**
>
> Goal 3: Preserve the spiritual and cultural heritage of the diverse communities on Imperial County.
>
> Objective 3.3: Engage all local Native American Tribes in the protection of Tribal cultural resources, including prehistoric trails and burial sites.

Additionally, the following program is included within the programs identified under Section 4.4.2 as outlined in the Conservation and Open Space Element:

> **Policy:** Identify and document significant historic and prehistoric resources, and provide for the preservation of representative and worth examples; and recognize

the value of historic and prehistoric resources, and assess current and proposed land uses for impacts upon these resources

Program:

- The County will use the CEQA process to conserve cultural resources and conform to Senate Bill 18 "Consultation with Tribal Governments" and Assembly Bill 52 "Consultation with Tribal Governments". Public awareness of cultural heritage will be stressed. All information and artifacts recovered in this process will be stored in an appropriate institution and made available for public exhibit and scientific review.

4.6.3 Thresholds of Significance

The significance criteria used to evaluate the project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G, a significant impact related to cultural resources would occur if the project would cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code §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:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined Public Resources Code Section 5020.1(K), or.
2. 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 Resource Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

4.6.4 Impacts Analysis

Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code §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 Public Resources Code Section 5020.1(K), or

Less-Than-Significant Impact with Mitigation. PRC Section 21074 provides guidance for defining TCRs as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Cultural Resources. (B) Included in a local register of cultural resources as defined in subdivision (k) of §5020.1.
2. 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 §5024.1. In applying the criteria set forth in subdivision (c) of §5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American Tribe. (b) A cultural landscape that meets the criteria of subdivision (a) is a Tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

A search of the NAHC Sacred Lands File was conducted for the APE and a 1-mile buffer in April 2017 (Appendix D). The NAHC search was negative, with no TCRs located in the APE. The majority of the resources identified within the Proposed Project APE are built environment structures. However, there are archaeological resources identified within the APE. Previously identified multi-component archaeological site P-13-008653/CA-IMP-8050 is within the proposed EHL Reservoir Project APE and is recommended eligible for inclusion on the NRHP; it will be affected by Project activities.

The current pedestrian survey expanded the boundaries of prehistoric cultural resource P-13-008653/CA-IMP-8050, identifying two additional prehistoric loci representing the original ceramic sherd concentration recorded in 2003 and updated with additional artifact counts and spatial data. One of the newly recorded isolates (ISO-EHL-1) consisted of prehistoric properties: two prehistoric ceramic body sherds, one with heat fractures and a coarse grain temper, possibly Colorado Buff; the second with heat discoloration. However, isolates are typically ineligible for NRHP listing. The effects to previous and newly discovered resources will be less than significant with avoidance measures incorporated as **MM-CR-1** and further detailed in Section 4.4.5 of this Draft EIR.

Consultation with Native American tribes and the California State Historic Preservation Officer (SHPO) was initiated by Reclamation and was finalized in May of 2023. Reclamation, as the lead agency for Section 106 consultation has determined that the proposed Project will have no adverse effect on any historic properties under Section 106 of the NHPA. The SHPO has concurred with Reclamation's findings that the proposed EHL Reservoir Project would result in "no adverse effect to historic properties."

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 Resource Code §5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Less-Than-Significant Impact with Mitigation. Previously identified multi-component archaeological site P-13-008653/CA-IMP-8050 and expanded boundaries under the current survey to include additional loci are within the proposed EHL Reservoir Project APE and is recommended eligible for inclusion on the NRHP; it will be affected by Project activities, but the effect will be less than significant with avoidance measures incorporated. Additionally, per Tribal consultation efforts, two Tribes (Viejas Tribal Government and Quechan Indian Tribe) have responded to outreach efforts, with the request for cultural monitoring during construction activities. Therefore, CA-IMP-8050 is not considered of cultural value to a California Native American Tribe.

As previously noted, Reclamation is the lead agency for NEPA and thus Section 106 Consultation. Reclamation's responsibility for protecting cultural resources is primarily based on the National Historic Preservation Act (NHPA); P.L. 89-665, as amended; its implementing regulations (36 CFR Part 800); and Reclamation Policy (LND P01) and Directives and Standards (LND 02-01). Reclamation, as the lead agency for Section 106 consultation has determined that the proposed Project will have no adverse effect on any historic properties under Section 106 of the NHPA. The SHPO has concurred with Reclamation's findings that the proposed EHL Reservoir Project would result in "no adverse effect to historic properties."

However, there is still the possibility of uncovering subsurface archaeological deposits near the boundaries of these previously identified and expanded resources. Impacts to any such inadvertent discoveries would be considered potentially significant. Monitoring during construction to appropriately treat inadvertent discoveries would reduce that impact to a level below significance. Native American monitoring would be extended to affiliated Tribes during the construction phases of the Proposed Project to protect unknown resources and to appropriately treat inadvertent discoveries. With incorporation of Mitigation Measure **MM-CR-1**, any potential impacts resulting from the Proposed Project would be less than significant.

4.6.5 Mitigation Measures

The majority of the resources identified within the Proposed Project APE are built environment structures, while the archaeological resources identified within the APE are proposed to be avoided via Project design. However, there is the possibility of impacting inadvertent discoveries of buried archaeological deposits during construction, which would have potentially significant impacts. The mitigation measures outlined below have been designed to fulfill the requirements of Section 106 of the NHPA and CEQA guidelines. IID will be the lead agency implementing cultural

resource mitigation measures and will provide information to Reclamation for their ongoing Section 106 oversight and consultation obligations.

MM-CR-1 Cultural Resources Avoidance and Monitoring

Prior to Start of Construction, IID will

1. Retain a Qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for archeology to oversee the execution of all mitigation measures related to archaeological and historic resources;
2. Preserve in place, via avoidance of resources, the archaeological sites identified; IID shall establish a 300-foot environmentally sensitive area with a maximum encroachment of 250-feet for barrier fencing for the protection of the archaeological sites;
3. Extend an invitation to the interested and affiliated tribes to be present during ground-disturbing activities that are proposed to occur on federal lands;
4. Conduct a Worker's Environmental Awareness Program (WEAP) training for archeological sensitivity and tribal cultural sensitivity for construction personnel for any ground disturbing activities on federal land;
5. If archaeological resources are encountered during ground-disturbing activities, the stipulations of 36 CFR 800.13(b)(3) and 36 CFR 800.13(c) shall apply. All activities within the immediate area of the discovery shall cease and measures shall be taken to secure and protect the discovery. Immediate telephone notification shall be made to the Environmental Group Manager at the Reclamation's Yuma Area Office (928) 343-8100. The activity may resume only after Reclamation has authorized a continuance.

4.6.6 Level of Significance After Mitigation

With incorporation of **MM-CR-1**, outlined in Section 4.6.5, Mitigation Measures, the Proposed Project would not result in significant impacts to any Tribal cultural resources.

CHAPTER 5
EFFECTS FOUND NOT TO BE SIGNIFICANT

Section **Page No.**

APPENDICES

No Appendices

FIGURES

No Figures

TABLES

CHAPTER 5
EFFECTS FOUND NOT TO BE SIGNIFICANT

Section 15128 of the CEQA Guidelines requires that an EIR briefly describe potential environmental effects that were determined not to be significant and therefore were not discussed in detail in the EIR. The environmental issues discussed in the following sections are not considered significant, and the reasons for the conclusion of non-significance are subsequently discussed. Because the proposed single cell design for the proposed East Highline Reservoir and Intake Channel Project (Proposed Project or Project) are proposed in the same location and are similar in all ways save for a slightly lower water volume to the latter, the evaluation provided below is applicable to both options.

No comments were received in response to the Notice of Preparation (NOP) with concerns regarding impacts on geology and soils, mineral resources, population and housing, public services, recreation, transportation and traffic, or utilities and service systems. During the NOP comment period.

5.1 AESTHETICS

The Proposed Project is not located near any existing scenic vista. For the purposes of this analysis, a scenic vista is described as scenic features that are listed, designated or otherwise recognized by the County of Imperial. The County's General Plan Conservation and Open Space Element identifies the proposed project site to have moderate visual quality, which may include "opportunities for conservation and open space areas" (County of Imperial 2016). The basin site is adjacent to agricultural fields to the south, northwest and west. The East Highline Canal, a large water conveyance facility abuts the western project site. To the east and northeast, is vacant BLM land, which consists of open, desert landscape. The majority of the proposed project site is used for agricultural purposes. There are no scenic vistas within the viewshed of the various aspects of the proposed project, given the flat nature of the proposed project site. The nearest paved transportation corridor SR 98 is located approximately two miles south of the proposed reservoir basin and the proposed intake channel will not traverse or extend south of the existing SR 98. The proposed Project would retain a similar visual character as the surrounding uses and would not substantially degrade the existing visual character or quality of the proposed project site and its surroundings with embankments at heights no greater than ten feet similar to existing AAC Reach near existing hydro-plant. Operational and construction lighting would be used for safety and security purposes during nighttime hours. However, all lighting would be directed downward or at a narrow beam angle, in order to focus all light only on the desired area. Therefore, impacts to scenic vistas would be less than significant and no further analysis is necessary.

5.2 AGRICULTURAL AND FORESTRY RESOURCES

The project area is made up of tracts of agricultural land, located on prime farmland and farmland of statewide importance (DOC 2014). The project would develop a main canal off-line reservoir and related infrastructure on land currently being used for agriculture. The Project site accommodating the reservoir basin is on land owned by the IID, while the intake channel will require right-of-way acquisition from private land owners and a small portion of the intake channel traverses federal land withdrawn to Reclamation. However, the Proposed Project would provide similar uses to those expressly allowed by Imperial County (County) land use regulations and would be supportive of agricultural practices because it would manage the water delivery for agricultural use downstream, supplying surrounding and downstream agricultural uses with a stable water supply. The Proposed Project would not convert farmlands to non-agricultural uses. The Proposed Project site is not located on a Williamson Act contract, therefore no impact would occur (DOC 2013). The Proposed Project site is not located on forest land, timberland, or timberland production land as defined in California Public Resources Code Sections 12220(g), 4526, and 51104(g), nor would it result in the loss of forest land. As such, impacts to agricultural and forestry resources would be less than significant.

5.3 ENERGY

Appendix F (Energy Conservation) of the CEQA Guidelines provides that potentially significant energy implications of a project must be considered in an EIR, with particular emphasis on avoiding or reducing the inefficient, wasteful, and unnecessary consumption of energy. As such, this discussion considers the Proposed Project's consumption of energy resources, particularly electricity, natural gas, and transportation fuels, during both the project's construction and operational phases. The physical environmental impacts associated with the generation of electricity were evaluated in Sections 4.2, Air Quality; 5.4, Greenhouse Gas Emissions; and 5.10, Utilities and Service Systems, of this EIR.

Construction of the Proposed Project is expected to last approximately 15 months to complete. Construction activities would consume energy through the operation of off-road equipment, trucks, and worker trips. The off-road equipment, as summarized in Section 4.2, would use diesel fuel during each phase of project construction. The minimum requirement to meet Toxics-Best Available Control Technology (Toxics-BACT) standards is for construction fleets to be comprised of 10% Tier 2 and Tier 3 equipment. Based on the analysis given in the Air Quality Impact Report, construction fleets used for the project would be comprised mainly of Tier 2 and Tier 3 equipment, and would therefore meet the Toxics-BACT standards, and lead to an improved efficiency for use of fuel. California regulations (CCR Title 13, Sections 2449(d)(3) and 2485) limit idling from both on-road and off-road diesel-powered equipment and are enforced by the Air Resources Board (ARB). Despite the increase in energy demand, primarily related to fuel use, during construction, project construction equipment requirements, combined

with local, state, and federal regulations, which limit engine idling times and require recycling of construction debris, would reduce short-term energy demand due to project construction. Therefore, it is anticipated that the construction phase would not result in a wasteful or inefficient use of energy, and the Proposed Project's impact on the wasteful and inefficient use of nonrenewable resources during construction of the project would be less than significant.

The proposed reservoir is anticipated to receive water by gravity flow only (i.e., no pumping) from an intake structure off the east side of the AAC Reach. Water that is stored for a later operational delivery from the proposed reservoir would be delivered through an automated gate outlet and structure with a gravity flow capacity of approximately 1,000 cubic feet per second for delivery into the East Highline Canal. The outlet gate would be controlled by a remote operated automated mechanism. The electricity used to operate the automated outlet gate would be minimal. The automated gates for the proposed Project will require normal 240 volt, 3-phase power to be supplied via existing distribution lines.

As the sixth-largest utility in California, IID controls more than 1,100 megawatts of energy derived from a diverse resource portfolio that includes its own generation as well as long- and short-term power purchases. IID has met or exceeded all Renewables Portfolio Standard requirements to date, procuring renewable energy from diverse sources, including biomass, biowaste, geothermal, hydroelectric, solar, and wind (IID 2018). Therefore, the energy required to operate the Proposed Project would be minimal compared to the overall, energy generated for the rest of IID's jurisdiction. As such, impacts would be less than significant with regard to consumption of energy. Therefore, the project's operational impacts relating to energy consumption would be less than significant.

5.4 GEOLOGY AND SOILS

The Alquist–Priolo Earthquake Fault Zoning Act identifies no active faults within the Bonds Corner Quadrangle within Imperial County. Consequently, the risk of surface rupture is low. Ground-shaking hazards associated with construction of the proposed reservoir and intake channel would be avoided through project design features in accordance with the USACE and Reclamation regulations on waterways. Additionally, ground-shaking hazards during construction of the proposed reservoir and intake channel would be avoided through project design features in accordance with the Uniform Building Code. The Proposed Project would implement structural design measures that reduce liquefaction risk. Therefore, impacts associated with liquefaction are expected to be less than significant, due to the generally flat topography of the project area, the Proposed Project is not anticipated to be susceptible to landslides and would be constructed in accordance with approval requirements of Reclamation. Construction activities for the Proposed Project, including the proposed reservoir, East Highline Canal connection, and the intake route to the AAC REach, would not be at risk of causing landslides. Compliance with the National Pollutant Discharge Elimination System

(NPDES) Construction General Permit would be necessary, as well as preparation of a stormwater pollution prevention plan (SWPPP) that would minimize or eliminate the potential soil erosion that could result from construction. The site has previously been developed and disturbed, and there are no known cases of landslide, lateral spreading, subsidence, liquefaction, or collapse occurring on site. Additionally, the Proposed Project would not be approved or built without compliance with the California Building Code and applicable geologic hazards regulations. Due to the generally flat topography of the project area, the Proposed Project is not anticipated to be susceptible to landslides and would be constructed in accordance with approval requirements of Reclamation.

According to USDA's Web Soil Survey, the project site is located on predominantly Rositas fine sand; other soils include Rositas sand, Meloland and Holtville loams, Meloland very fine sandy loam, and Holtville silty clay (USDA 2019). These soils are predominantly considered well to moderately well drained. Prior to construction, a geotechnical report would be prepared to assess the Proposed Project's susceptibility to landslides, lateral spreading, subsidence, liquefaction, or collapse and recommendations will be adhered to. Therefore, by preparing a geotechnical report and complying with the California Building Code and other applicable geologic regulations, impacts to geology and soils are expected to be less than significant. No groundbreaking activities would result during operations of the Proposed Project. Therefore, no impact would occur during operations.

5.5 GREENHOUSE GAS EMISSIONS

An Air Quality and Greenhouse Gas Emissions Assessment Technical Memorandum was prepared by Dudek in April 2019, and is included in this EIR as Appendix B. The memorandum estimates criteria air pollutant and greenhouse gas (GHG) emissions from construction of the Proposed Project and evaluates potential air quality and GHG emissions impacts resulting from project construction. Although the estimated commencement date for project construction is anticipated to occur at a later date compared to the construction schedule assumed at the time of modeling included in Appendix B, for the purposes of construction modeling, the models do not need to use the exact commencement and completion dates to accurately represent the project construction emissions. This is because state and local regulations, restrictions, and increased market penetration of cleaner construction equipment are anticipated to continue to reduce emissions in the future and will foreseeably continue to be more strictly regulated in the future, project emissions are reasonably expected to continue to decline. Thus, by utilizing an earlier start date of October 2018, the estimated emissions used in the analysis for this EIR likely overstate actual emission levels. Therefore, the analysis and modeling included herein continue to provide an accurate and conservative assessment of the project's construction-related greenhouse gas pollutant emissions.

Construction of the reservoir would occur over an approximately 15-month construction period and involve the following components: construction of the reservoir; canal and measurement flume; sedimentation basin; construction of the Holdridge Road realignment, channel inlet

structure, reservoir outlet gate, meter vault, and East Highline Canal outfall structure; construction of the AAC Reach and East Highline Canal tie-ins.

5.5.1 Construction Emissions

Construction of the project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor and haul trucks, and worker vehicles. The Imperial County APCD does not have adopted GHG thresholds; however, total construction emissions of the Proposed Project were calculated. The California Emissions Estimator Model (CalEEMod) was used to calculate the annual GHG emissions based on the construction scenario described in Attachment A of Appendix B. Construction of the Proposed Project is anticipated to last approximately 15 months. Table 5-1 presents construction GHG emissions for the Proposed Project from on-site and off-site emission sources, noting that the SR-98 Detour assessed as one of the potential intake route alternatives is no longer a project consideration.

Table 5-1
Estimated Annual Construction GHG Emissions

Project Component	CO_2	CH_4	N_2O	CO_2e
	Metric Tons Per Year			
Modelling Year 2018				
Reservoir	99.78	0.03	0.00	100.50
~~SR-98 Detour~~	~~46.79~~	~~0.01~~	~~0.00~~	~~47.14~~
Canal Tie-Ins	50.92	0.01	0.00	51.17
Sedimentation Basin	300.46	0.06	0.00	301.91
Canal and Measurement Flumes	220.69	0.03	0.00	221.53
Modelling Year 2019				
Reservoir	506.24	0.11	0.00	509.02
Canal Tie-Ins	38.65	0.00	0.00	38.75
Structures	282.13	0.05	0.00	283.43
Total	**1,545.66**	**0.30**	**0.00**	**1,553.45**

Notes: GHG = greenhouse gas; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; SR = State Route. See Attachment A to Appendix B for complete results.

As shown in Table 5-1, the estimated total GHG emissions during construction would be approximately 1,553 metric tons (MT) carbon dioxide equivalent (CO_2e) over the 15-month construction period. As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the Proposed Project would be temporary in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions.

To evaluate whether a project's construction GHG emissions are cumulatively considerable, ICAPCD recommends that projects be assessed based on whether a project would conflict with

any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The Proposed Project would not conflict with the state's trajectory toward future GHG reductions. Per guidance from the South Coast Air Quality Management District (SCAQMD 2008), construction emissions are typically amortized over a 30-year period to account for the contribution of construction emissions over the lifetime of a project. Thresholds have been proposed by various agencies and air districts including both the Bay Area Air Quality Management District and the SCQGMD. The Bay Area and South Coast Air Quality Management Districts have each developed significance thresholds of 1,100 MT CO_2e and 3,000 MT CO_2e per year. The Proposed Project would result in amortized construction emissions of approximately 52 MT CO_2e per year, which is substantially less than these thresholds. Based on the preceding considerations, the Proposed Project's construction GHG emissions are not cumulatively considerable and are considered less than significant.

Applicable Plans, Policies, or Regulations

Imperial County has not adopted a comprehensive climate action plan or an equivalent GHG reduction plan and there is currently no local guidance that would be applicable to the Proposed Project. At this time, no mandatory GHG plans, policies, or regulations or finalized agency guidelines would apply to the construction of the Proposed Project, thus no conflict would occur.

Consistency with the CARB Scoping Plan

The Climate Change Scoping Plan, approved by California Air Resources Board (CARB) in 2008 and updated in 2017 and 2022, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. Moreover, the Final Statement of Reasons for the amendments to the CEQA Guidelines reiterates the statement in the Initial Statement of Reasons that "[t]he Scoping Plan may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (CNRA 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions and changes to the vehicle fleet (hybrid, electric, and more fuel-efficient vehicles) and associated fuels (e.g., Low Carbon Fuel Standard), among others. While state regulatory measures would ultimately reduce GHG emissions associated with the Proposed Project through their effect on these sources, no statewide plan, policy, or regulation would be specifically applicable to reductions in GHG emissions from the Proposed Project.

Consistency with the SCAG 2016–2040 RTP/SCS

At the regional level, SCAG has adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) for the purpose of reducing GHG emissions attributable to passenger vehicles in Imperial County and surrounding areas. The RTP/SCS quantified an 8% reduction in emissions per capita by 2020, an 18% reduction by 2035, and a 21% reduction by 2040 (SCAG 2016). Although the RTP/SCS does not regulate land use or supersede the exercise of land use authority by SCAG's member jurisdictions (i.e., Imperial County), the RTP/SCS is a relevant regional reference document for purposes of evaluating the connection of land use and transportation patterns and the corresponding GHG emissions. The RTP/SCS is not directly applicable to the Proposed Project because the underlying purpose of the RTP/SCS is to provide direction and guidance on future regional growth (i.e., the location of new residential and non-residential land uses) and transportation patterns throughout the region, as stipulated under Senate Bill 375. The Proposed Project involves construction of a reservoir and associated infrastructure, which entails short-term use of construction equipment and worker vehicle trips. As such, the Proposed Project would not conflict with the goals and policies of the RTP/SCS.

Consistency with Executive Order S-3-05

This executive order establishes the following goals: GHG emissions should be reduced to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050.

Consistency with Senate Bill 32

Senate Bill 32 establishes a statewide GHG emissions reduction target whereby CARB, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions, shall ensure that statewide GHG emissions are reduced to at least 40% below 1990 levels by December 31, 2030.

CARB believes that the state is on a trajectory to meet the 2030 and 2050 GHG reduction targets set forth in AB 32, Senate Bill 32, and Executive Order S-3-05. This is confirmed in the 2022 Update, which states, "This Scoping Plan draws on a decade and a half of proven successes and additional new approaches to provide a balanced and aggressive course of effective actions to achieve carbon neutrality in 2045, if not before, in addition to the 2030 goal." (CARB 2023).

The Proposed Project would not interfere with implementation of the previously described GHG reduction goals for 2030 or 2050, because the Proposed Project's GHG emissions would cease after construction activities have been completed. Based on the discussions herein, the Proposed Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Furthermore, the Proposed Project would thus not conflict with an

applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, and impacts would be less than significant.

5.5.2 Operational Emissions

Once operational, the project would consist of a 2,100 acre-foot capacity reservoir facility, covering approximately 440 acres, which would manage up to approximately 365,000 acre-feet of water annually. Once constructed, the reservoir and associated infrastructure would not have any components that emit GHG emissions. The Proposed Project's GHG emissions would cease after construction activities have been completed and once operational would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment nor would it conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Therefore, operational impacts are considered less than significant.

5.6 LAND USE AND PLANNING

The proposed project would be located on a site that is currently used for agricultural purposes, with the exception of three acres of the intake channel, which crosses Reclamation land, thus no established communities would be divided. The Proposed Project site is further consistent with the intended use of Reclamation's withdrawn lands for water management use. Except for the portion of the proposed project site located on Reclamation land, the proposed project site is currently designated by the General Plan Land Use Element as "Agriculture." (County of Imperial 2018.)

That portion of the proposed project site is currently zoned as A-2 (General Agriculture) and A-3 (Heavy Agriculture). (County of Imperial 2017.) The proposed project would be consistent with the County Zoning Ordinance as it would support agricultural production. The A-2 zone permitted uses include agricultural accessory structure(s), buildings, and uses (County of Imperial 1998). The A3 zone permitted uses include miscellaneous uses including water storage or groundwater recharge facilities, and water systems. (County of Imperial 1998.) The proposed project would include the construction of an operational reservoir with the primary purpose of managing water supplies for the agricultural uses within the IID service area. Therefore, the proposed reservoir would act as an accessory agricultural structure and use and a short-term water storage facility as it retains water for a short period of time until the water is delivered to agricultural water users. The proposed project, therefore, does not conflict with any applicable land use plan and policy, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impact would result from the proposed project and no further analysis is warranted.

5.7 MINERAL RESOURCES

There are no anticipated known mineral resources within the project site, and no evidence exists indicating that there could be mineral resources in the project vicinity (County of Imperial 2023). Furthermore, the project site is not designated as a locally important mineral resource recovery site in the Conservation and Open Space Element of the County of Imperial General Plan. There would be no loss of availability of a known mineral resource of value to the region due to construction and operation of the project. Therefore, no significant impacts to mineral resources would occur, and additional analysis is unnecessary.

5.8 NOISE

The proposed Project would result in a temporary increase in noise levels during construction due to the transport of workers and equipment, and short-term daytime project construction activities. In accordance with the County's Noise Element, construction noise from a single piece of equipment or a combination of equipment shall not exceed 75 dB L_{eq} when averaged over a one-hour period. Construction equipment operation shall be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday, and 9 a.m. to 5 p.m., Saturday. No commercial construction operations are permitted on Sunday or holidays.

The Federal Highway Administration's (FHWA) Roadway Construction Noise Model (RCNM) is used to estimate construction noise levels from locations adjacent to the nearest noise-sensitive land uses which is 150 feet for two dwelling units within Project vicinity. From the nearest residence (measured from the nearest occupied residence to the proposed project basin boundary), noise levels would not exceed 74 dBA L_{eq} during construction phases. Typically, the noise from construction would be substantially lower than the maximum level. Generally, construction noise is estimated to be in the range of 63 to 64 dBA Leq. Therefore, noise levels would not exceed the established standards in the General Plan and no impact would occur.

Once operational, the proposed Project would consist of the reservoir and intake channel with automated gates, which would not generate noise levels in excess of established standards. Furthermore, the proposed project will only have staff on-site occasionally for maintenance purposes. The proposed project is not be located within the authority of an airport land use plan or within two miles of a private airstrip. Therefore, no impact would occur with the proposed project. Therefore, operational noise impacts would not exceed the established standards in the General Plan and any noise impacts would be temporary and less than significant. Therefore, no further analysis is necessary.

5.9 POPULATION AND HOUSING

For purposes of evaluating worst-case environmental impacts, it is assumed that a total of approximately 100 construction workers, all of whom could be on-site on a single given day, would be employed during construction of the Proposed Project. It is anticipated that these new jobs would be filled by the existing residential population in the greater Imperial County area over the temporary 15-month construction period. Therefore, the Proposed Project would not generate substantial population growth. The project would not remove an impediment to growth to the surrounding area by removing infrastructure limitations. The Proposed Project would not result in the demolition of housing, which would necessitate replacement housing to be constructed elsewhere. Further, the project would not result in substantial displacement of people, because no aspect of the project would result in the demolition of housing. As such, no significant impacts to population and housing would occur, and additional analysis is not necessary.

5.10 PUBLIC SERVICES

The Proposed Project would not introduce any people or residences to the area. For purposes of evaluating worst-case environmental impacts, it is assumed that a total of 100 construction workers, all of whom could be on-site on a single given day, would be employed during construction of the Proposed Project. It is anticipated that these new jobs would be filled by the existing residential population in the greater Imperial County area over the 15-month construction period. Therefore, the Proposed Project would not generate substantial population growth. Construction activities may result in a temporary increased need for fire and police protection in the area due to the increase in personnel at the project site for construction. However, compliance with local, state, and federal fire regulations as well as traffic and building regulations during construction activities would minimize the need for fire protection and police services. Schools, parks, and other public facilities in the area would not be adversely be affected by the Proposed Project, and impacts would be less than significant. No additional analysis is necessary.

5.11 RECREATION

For purposes of evaluating worst-case environmental impacts, it is assumed that a total of 100 construction workers, all of whom could be on-site on a single given day, would be employed during construction of the Proposed Project. It is anticipated that these new jobs would be filled by the existing residential population in the greater Imperial County area over a temporary 15-month construction period. Therefore, the Proposed Project would not generate substantial population growth. The Proposed Project would not introduce a new population to the area, and thus would not increase the use of existing neighborhoods, regional parks, or other recreational facilities. Additionally, the Proposed Project does not include any recreational facilities. As such, impacts to recreation would be less than significant and no additional analysis is necessary.

5.12 TRANSPORTATION AND TRAFFIC

The proposed Project is not anticipated to affect existing traffic, because existing traffic volumes in the vicinity are low and the project does not include any off-site roadway improvements, aside from the reroute of Holdridge Road which accommodates local agricultural operations. The project would result in the partial abandonment and realignment of Holdridge Road, which is a county road that currently extends through the proposed reservoir basin site and turns into a dirt road as it extends onto BLM lands. Bornt Road, also a dirt county road that serves local traffic and dead ends within project vicinity, will be temporarily closed while the intake channel is constructed. Underground culverts will be constructed across Bornt Road to accommodate the intake structure. During construction, notices of the road closures and the detours would be posted. An encroachment permit would be secured through the Imperial County Department of Public Works for proposed realignment of Holdridge and improvements within Bornt Road right-of-way related to the temporary detour route.

Furthermore, operations of the Proposed Project would be unstaffed, and therefore, the Project would not result in additional daily trips to the project site. The Proposed Project would be consistent with the goals and objectives of the Circulation and Scenic Highway Element as well as the Imperial County Long Range Transportation Plan 2013 Update and Draft Update currently under public review, because the project would not result in population growth, new construction, or any other changes that would affect traffic (County of Imperial 2023).

The Holtville Airport, which is 7.5 miles north of the site, does not have a Compatibility Map, but given the distance from the site and the relatively small size of the airport, no impacts would occur. The Proposed Project is not within Calexico International Airport Compatibility Map's range (Calexico International Airport 2017). As the project does not include any off-site roadway improvements, the project is not expected to result in hazards due to a design feature or incompatible use. No emergency access roads would be included in the Proposed Project, because the operation of facility would be unstaffed. Additionally, the Proposed Project would not block any existing circulation element roadways, including emergency access roads. As such, traffic impacts would be less than significant. No additional analysis is necessary.

5.13 UTILITIES AND SERVICE SYSTEMS

The Project would not increase the amount of wastewater produced or increase the demands for water supplies in the area, because the Proposed Project would not introduce a new population to the area. Thus, the project would not increase the amount of wastewater produced in the area, nor would it exceed wastewater treatment requirements of the applicable RWQCB. The project would not require or result in the construction of new water, wastewater treatment, or stormwater drainage facilities or expansion of existing facilities. Construction waste would be taken to the Holtville Solid Waste

Services Landfill, which has the capacity for the anticipated construction waste. Operations of the project would not increase the generation of solid waste in the area and therefore would not increase demand on landfills. Additionally, disposal of solid waste generated during construction would comply with federal, state, and local statutes and regulations related to solid waste. Impacts related to utilities and service systems would be less than significant.

5.14 WILDFIRE

CAL FIRE adopts Fire Hazard Severity Zone maps for State Responsibility. According to the Fire Hazard Severity Zone Map for the Imperial County State Responsibility Area there are no zones within the Project area or vicinity nor classified as Moderate, High or Very High fire hazard risks as of June 15, 2023. Therefore, wildfire risks are not applicable for this Proposed Project.

CHAPTER 6
OTHER CEQA CONSIDERATIONS

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APPENDICES

No Appendices

FIGURES

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CHAPTER 6
OTHER CEQA CONSIDERATIONS

6.1 OVERVIEW

This chapter, as required by the CEQA Guidelines, presents discussions of the significant and unavoidable impacts, growth-inducing impacts, mandatory findings of significance, and cumulative impacts.

6.2 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires an EIR to describe any significant impacts that cannot be mitigated or avoided through project alternatives to a less-than-significant level. All of the impacts associated with the proposed EHL Reservoir and Intake Channel Project (Proposed Project) would be reduced to a less-than-significant level through implementation of Mitigation Measures **MM AQ-1** and **MM-AQ-2**, **MM-BIO-1** through **MM-BIO-8**, **MM-CR-1, MM-CR-2**, and **MM-HAZ-1** through **MM-HAZ-3**. As such, there would be no significant and unavoidable impacts.

6.3 GROWTH INDUCEMENT

Implementation of the proposed project would result in a single basin reservoir, up to approximately 2,100 acre-feet capacity on agricultural land, in Imperial County (the County) for the purpose of managing up to 365,000 acre-feet of water annually. As discussed in Section 5.9, Population and Housing, for purposes of evaluating the worst-case environmental impacts, it is assumed that up to 100 construction workers, all of whom could be on-site on a single given day, would be employed during construction of the Proposed Project. It is anticipated that these new jobs would be filled by the existing residential population in the greater Imperial County area. Therefore, the Proposed Project would not generate substantial population growth. The Project would not remove an impediment to growth to the surrounding area by removing infrastructure limitations.

According to the U.S. Department of Labor/US Census Bureau, Imperial County has a civilian labor force of approximately 114,730, which is 64.2% of the total population in the County (USCB 2017). Therefore, the proposed project would represent a nominal increase in the labor force, and thus a nominal increase in economic growth. Additionally, project implementation would not remove barriers or obstacles to growth; the project would be developed on a site owned by IID, which is currently fallow agriculture ground. While the Project would result in the construction of water infrastructure, these utilities would connect with existing infrastructure and would not induce growth. While the project may induce growth in relationship to the temporary increased

employment in the area, project implementation would not result in substantial growth inducement above and beyond what has been considered in and planned for in regional and local planning documents.

6.4 CUMULATIVE

The CEQA Guidelines Section 15355 indicates that a cumulative impact refers to two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. Section 15130 of the CEQA Guidelines requires that an EIR address cumulative impacts of a project when a project's incremental effect is cumulatively considerable, where "cumulatively considerable" means that the effects of an individual project are significant when added to the effects of past, present, and probable future projects, causing related effects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. A project's contribution is not considered cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact (14 CCR 15130(a)(3)).

The CEQA Guidelines further state that "an EIR should not discuss impacts which do not result in part from the project evaluated in the EIR" (14 CCR 15000 et seq.). This section provides a description of the related projects assessed for cumulative impacts when combined with the incremental impacts of the proposed project, the potential environmental impacts that relate to the proposed project, the status of the environmental review process for the related projects, and the potential cumulative impacts when the incremental contribution of the related projects is combined with the incremental impacts of the proposed project.

Section 6.4.1, Cumulative Projects, describes the projects considered in this cumulative impact analysis. It also describes each project's environmental status and the anticipated impacts of each project that could contribute to a cumulative impact when added to incremental impacts of the proposed project. Section 6.4.2, Cumulative Impacts, aggregates the potential cumulative impacts of the proposed project in conjunction with all of the projects considered in this analysis by resource area.

6.4.1 Cumulative Projects

Table 6-1 presents a summary of the six cumulative projects. This section provides a discussion of the effects that the Proposed Project may have on each environmental category of concern, such as air quality, biological resources, cultural and tribal cultural resources. Consistent with CEQA, this discussion is guided by the standards of practicality and reasonableness.

Table 6-1
Cumulative Projects List

Map ID No.	Project Title	Project Location	Project Description	Status
1	QSA Water Transfer and Conservation Project- *Lloyd Allen Mid-Lateral Reservoir*	2.5 miles northeast of the city of Calipatria, California within APN 023-030-007 in Township 12 South, Range 14 East, S..B.M	A 40 AF +/- capacity, operational reservoir that will manage approximately 4,900 acre-feet of water per year and conserve up to 400 AF of water annually.	Final EIR submitted in September 2003. Construction Final in 2023.
2	QSA Water Transfer and Conservation Project- *EHL Lateral 1 Mid-Lateral Reservoir*	0.5 mile south of the corner of Miller Road and Connelly Road, west of the East Highline Canal within Township 16 South, Range 16 East, S.B.M	A 40 AF +/- capacity, operational reservoir that will manage approximately 2,900 acre-feet of water per year and conserve up to 1,000 AF of water annually.	Final EIR submitted in September 2003. Construction planned for 2025.
3	QSA Water Transfer and Conservation Project - *Main Canal Seepage Recovery*	Immediately west of the East Highline Canal within Section 23, Township 15 S., Range 16 E., S.B.M.	The installation of a new subsurface collection of perforated drain lines along the East Highline Canal to collect seepage and pump back into the East Highline Canal for downstream users resulting in annual water conservation of 1,000 AF.	Final EIR submitted in September 2003. Construction planned for 2024.

Notes: AF = acre-feet; EIR = environmental impact report.
* Not shown on map, as location is Valley-wide.

6.4.2 Cumulative Impacts

Air Quality

Air pollution is largely a cumulative impact. The cumulative setting for air quality is the geographic scope encompassed by the SSAB. Currently, the SSAB is either in attainment or unclassified for all federal and state air pollutant standards with the exception of ozone (8-hour) and particulate matter less than 10 microns in diameter (PM_{10}). Air pollutants transported into the SSAB from the adjacent South Coast Air Basin (Los Angeles, San Bernardino County, Orange County, and Riverside County) and from Mexicali (Mexico) substantially contribute to the non-attainment conditions in the SSAB. The nonattainment status of regional pollutants is a result of past and present development, and the Imperial County Air Pollution Control District (ICAPCD) develops and implements plans for future attainment of ambient air quality standards. The SSAB has been designated as a federal and state nonattainment area for ozone (O_3) and PM_{10}. The nonattainment status is the result of cumulative emissions from various sources of air pollutants and their precursors within the SSAB, including motor vehicles, off-road equipment, and commercial and industrial facilities. Based on these considerations, project-level thresholds of significance for criteria pollutants are used to help determine whether a project's individual

emissions would have a cumulatively considerable contribution on air quality. If a project's emissions would exceed the ICAPCD significance thresholds, it would be considered to have a cumulatively considerable contribution. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant. Construction of the Proposed Project would generate reactive organic gases and oxides of nitrogen emissions (which are precursors to ozone) and emissions of PM_{10} and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). As indicated in Table 4.1-2, project-generated construction oxides of nitrogen (NO_x) emissions would likely exceed the ICAPCD emission-based significance threshold. **MM-AQ-1** and **MM-AQ-2** would reduce impacts to levels below significance. Cumulative PM_{10} and $PM_{2.5}$ emissions would be reduced because all future projects would be subject to Regulation VIII – Fugitive Dust Control Measures, which sets forth general and specific requirements for all construction sites in the ICAPCD. Based on the previous considerations, the project would result in a cumulatively considerable increase in emissions of nonattainment pollutants, absent mitigation measures. Impacts would be reduced to levels below significance with implementation of **MM-AQ-1** and **MM-AQ-2**.

Operations of the proposed project would not interfere with State Implementation Plans. Short-term construction emissions would be mitigated to below a level of significance, and the cumulative projects would also result in less than significant impacts. Further, the Proposed Project would not conflict with any of the state's greenhouse gas (GHG) reduction goals for 2030 or 2050 because the Proposed Project's GHG emissions would cease after construction activities have been completed. Therefore, the Proposed Project would not conflict with the state's trajectory toward future GHG reductions, and the proposed project's impacts on GHG emissions in the 2030 and 2050 horizon years would not be cumulatively considerable. As such, the Proposed Project would not result in a cumulatively considerable impact related to air quality.

Biological Resources

As stated in Section 4.2, Biological Resources, temporary and permanent impacts would occur with construction of the Proposed Project. In addition, there would be construction and operation-related indirect impacts related to dust and chemical pollutants, and chemical releases from vehicles. As discussed in Section 4.5, Hydrology and Water Quality, operations of the proposed project would not result in significant water quality impacts as the proposed intake channel would be lined, reducing the amount of erosion and sedimentation of the water passing through. In addition, the proposed project would not increase or decrease the amount of agricultural water diverted from the AAC, since the proposed reservoir serves as temporary storage to support water conservation and management efforts. The Proposed Project would not substantially affect water quality or water quantity. Cumulative impacts to biological resources to water bodies may be substantially affected by cumulative projects. However, each project incorporates corresponding mitigation for these resources including the Proposed Project under **MM-BIO-8**.

Impacts to biological resources as a result of the Proposed Project would be mitigated to levels below significance. Cumulative projects listed in Table 6-1, such as those carried out under the QSA Transfer and Conservation Project, that may have temporary and permanent impacts to biological resources would also be mitigated on a project-by-project basis and subject to federal, state, and local regulations. All projects carried out under the QSA Transfer and Conservation Project are mitigated under the Biological Opinion, Incidental Take Permit 2091,Salton Sea Air Quality Management Plan, Salton Sea Air Quality Mitigation Program and the Draft Habitat Conservation Plan/Natural Communities Conservation Plan for the QSA Water Transfers. Therefore, cumulative impacts to biological resources are considered less than cumulatively considerable.

Cultural Resources

As stated in Section 4.3, Cultural Resources, there is the possibility of impacting inadvertent discoveries of buried archaeological deposits during construction, which would have potentially significant impacts. **MM-CR-1** and **MM-CR-2** would ensure oversight and consultation obligations, protection of unknown archaeological resources, paleontological resources, and/or grave sites. Implementation of the Proposed Project, in combination with large-scale proposed, approved, and reasonably foreseeable projects in the region, has the potential to result in impacts to archaeological and historic resources. Further, the cumulative projects listed in Table 6-1 would be subject to the applicable federal, state, and local regulations protecting these resources. Therefore, considering impacts are addressed on a project-by-project basis, this would be a less than cumulatively considerable impact.

Hazards and Hazardous Materials

As discussed in Section 4.4, Hazards and Hazardous Materials, the proposed project would comply with federal, state, and local health and safety requirements that are intended to minimize hazardous materials risk to the public, such as California Occupational Safety and Health Administration requirements, the Hazardous Waste Control Act, California Accidental Release Prevention, and the California Health and Safety Code. In addition, with incorporation of **MM-HAZ-1** through **MM-HAZ-3** and **MM-AQ-2**, use and disposal of hazardous materials would not pose a significant risk to the public and environment. However, hazards and hazardous materials cumulative impacts are addressed on a project-by-project basis, and considering there are no projects listed in Table 6-1 within a 1-mile radius of the Proposed Project, there are no projects within the geographic scope for the consideration of cumulative effects from hazardous materials sites. Therefore, cumulative impacts to hazards and hazardous materials would be less than cumulatively considerable.

Hydrology and Water Quality

As discussed in Section 4.5, Hydrology and Water Quality, the proposed project would not result in significant hydrology or water quality impacts. The project in combination with cumulative projects listed in Table 6-1, would result in increased water management leading to improved efficiencies in water delivery and conservation within IID's system. The proposed project and each of the cumulative projects listed in Table 6-1 would be required to adhere to all applicable regulations, including the National Pollutant Discharge Elimination System and stormwater pollution prevention plan requirements that would avoid impacts to water quality and drainage. Further, the proposed project would not use or otherwise alter the groundwater conditions in the area. As such, the proposed project would not contribute to a cumulative hydrology or water quality impact.

Tribal Cultural Resources

As stated in Section 4.6, Tribal Cultural Resources, there is the possibility of impacting inadvertent discoveries of buried archaeological deposits during construction, which would have potentially significant impacts. **MM-CR-1** would ensure oversight and consultation obligations, protection of unknown tribal cultural resources. Implementation of the Proposed Project, in combination with large-scale proposed, approved, and reasonably foreseeable projects in the region, has the potential to result in impacts to archaeological and tribal cultural resources. Further, the cumulative projects listed in Table 6-1 would be subject to the applicable federal, state, and local regulations protecting these resources. Therefore, considering impacts are addressed on a project-by-project basis, this would be a less than cumulatively considerable impact.

6.4.3 Conclusion

None of the documents identified significant new cumulative impacts in association with the Proposed Project. Overall, there are no significant new cumulative impact circumstances or information relevant to environmental concerns and bearing on the project or its impacts.

6.5 MANDATORY FINDINGS OF SIGNIFICANCE

The proposed project would include groundbreaking activities in a rural, undeveloped area, and would thus have the potential to interfere with the habitat of a wildlife species, as well as impact cultural and tribal resources. However, as discussed in Section 4.3, with implementation of **MM-BIO-1** through **MM-BIO-8**, the Proposed Project would have a less-than-significant impact on biological resources. Additionally, as discussed in Section 4.4, with incorporation of **MM-CR-1** and **MM-CR-2**, the Proposed Project would not result in significant impacts to any historical,

archaeological, or tribal cultural resources. As such, the Proposed Project would not degrade the quality of the environment, substantially reduce suitable habitat of a fish or wildlife species, or eliminate important examples of the major periods of California history or prehistory.

As stated in Sections 4.1 and 5.5, construction of the Project would result in GHG emissions, which are primarily associated with use of off-road construction equipment, on-road vendor and haul trucks, and worker vehicles. To evaluate whether the Proposed Project's construction GHG emissions are cumulatively considerable, ICAPCD recommends that projects are assessed based on if a project would conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The Proposed Project would not conflict with the state's trajectory toward future GHG reductions. Furthermore, construction activities would occur over a short duration of approximately 15 months and would cease once construction is completed. The Proposed Project would result in amortized construction emissions of less than 52 metric tons carbon dioxide equivalent per year, which is substantially less than the thresholds provided in Section 4.2. Based on the preceding considerations, the Proposed Project's construction GHG emissions are not cumulatively considerable and are considered less than significant.

The Proposed Project would include the use of construction equipment that would produce emissions. The contribution of emissions to the airshed has the potential to have an adverse effect on human beings. Construction activity would occur at various locations within the 506-acre Project site and would not be situated in the same location for an extended period of time. The nearest receptors are 150 feet (0.2 miles) in distance from the proposed Project site, otherwise there are no other sensitive receptors within 5,000 feet (0.95 miles) of the Project site. As such, the site is surrounded by an insignificant number of people and therefore would not create a significant air quality impact affecting a substantial number of people. As stated in Section 4.8, Noise, at the nearest residence (measured from the nearest residence to the project boundary), noise levels would not exceed 74 A-weighted decibels equivalent sound level (dBA L_{eq}) during the most intensive construction phases. Typically, the noise from construction would be substantially lower, within a range of 63 to 64 dBA L_{eq}. As such, thresholds would not be exceeded during construction of the proposed project. However, average noise levels from construction activities may be annoying from the nearest sensitive receptors since levels are expected to be higher than the ambient noise level in the site vicinity. However, restricting construction activities to the daytime period will avoid disruption of evening relaxation and overnight sleep periods. Considering that the nearest receptors are 150 feet (0.2 miles) in distance from the proposed Project site, there are no other sensitive receptors within 5,000 feet (0.95 miles) of the Project site, and the Project would not result in significant direct or indirect impacts in regard to air quality and noise, the proposed Project would not cause substantial adverse effects on human beings.

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CHAPTER 7
PROJECT ALTERNATIVES

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APPENDICES

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CHAPTER 7
PROJECT ALTERNATIVES

The California Environmental Quality Act requires that an EIR evaluate a "reasonable" range of alternatives to a Proposed Project that would feasibly attain most of the basic objectives of the Proposed Project and would avoid or lessen any significant environmental impacts. EIRs are also required to evaluate the comparative merits of the alternatives. This chapter of the EIR describes and evaluates alternatives to the proposed EHL Reservoir and Intake Channel Project and implements the requirements set forth in the CEQA Guidelines for alternatives analysis. This chapter also identifies the Environmentally Superior Project Alternative as required by CEQA Guidelines, Section 15126.6(e)(2).

7.1 RATIONALE FOR ALTERNATIVES SELECTION

The Proposed Project was determined to result in potentially significant short-term impacts related to air quality, biological resources, cultural resources, and hazardous materials. However, with implementation of appropriate mitigation, all potentially significant impacts identified in the EIR would be reduced to less-than-significant levels, and it is fully anticipated that mitigation will appropriately occur. As a result, for the purposes of this document, these alternatives (unless otherwise noted), may only reduce potential impacts in severity, since all project impacts would be reduced to below levels of significance.

Section 15126.6(f) of the CEQA Guidelines states that "the range of alternatives in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The CEQA Guidelines provide several factors that should be considered in regard to the feasibility of an alternative. Those factors include: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site (if an off-site alternative is evaluated). This EIR analyzes a total of three alternatives: the No Project Alternative, a Larger Capacity Reservoir Alternative, and Alternative Intake Routes Alternative. All of these are evaluated under Section 7.5, Alternatives Identified and Analyzed, of this chapter.

7.2 PROJECT OBJECTIVES

The purpose of the Proposed Project is to maximize IID's current levels of operational flexibility while creating an additional tool to assist in meeting main-system and on-farm conservation program goals consistent with IID's Water Conservation Plan with the intent and purpose of water conservation. The Project is also consistent with the State of California's water conservation

objectives established under Executive Order B-37-16 and the Reclamation Reform Act. The specific objectives for the Proposed Project are further described below.

- The Project will increase delivery flexibility and provide conservation opportunities within the district to accommodate in-valley water demand. These efforts are consistent with the objectives set forth in IID's 2021 Water Conservation Plan. Mid lateral and off-line reservoirs are an integral part of the IID System Conservation Program.
- The Project will help support IID's 12-Hour Delivery Program via maximized operational storage capacity and flexibility, enabling farmers to match crop water requirements and conserve water. The reservoir will help balance supply-demand mismatches due in part to conveyance travel time, peak demands, unavailable storage, and rain events.
- The Project will provide consistency with the 2018 California Water Plan goals: Goal 2-Strengthen Resiliency and Operational Flexibility of Existing and Future Infrastructure; Goal 4-Empower California's Under-Represented and Vulnerable Communities; and, Goal 6-Support Real-time Decision-making, Adaptive Management, and Long-term Planning.
- The Project will be in support of the Reclamation Reform Act of 1982 to " . . . encourage . . . consideration and incorporation of prudent and responsible water conservation measures . . .by . . . recipients of irrigation, municipal and industrial water . . ."

The specific project design objectives are described below.

- Optimal reservoir placement that will benefit the greatest number of downstream IID water users and on-farm water conservation efforts.
- Utilize a route with the most beneficial hydrologic conditions to accommodate gravity flow (i.e., avoiding/minimizing pumping).
- Minimize the length of the intake channel and the outflow channel to the East Highline Canal.
- Minimize displacement of existing IID and farming infrastructure.

7.3 SELECTION OF ALTERNATIVES

The range of alternatives and methods for selection is governed by CEQA and applicable CEQA case law. This chapter includes the range of project alternatives that have been considered by the lead agency (IID) for examination, as well as its reasoning for selecting these alternatives. As stated in Section 15126.6(a) of the CEQA Guidelines (14 CCR 15126.6(a)), there is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason. This rule is described in Section 15126.6(f) of the CEQA Guidelines (14 CCR 15126.6(f)) and requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. As defined in Section 15126.6(f) of the CEQA Guidelines, the rule of reason limits alternatives analyzed to those that would avoid or substantially lessen one or more of the significant effects of a project. Of those alternatives, an EIR needs to examine in detail only the ones that the lead agency determines could feasibly attain most of

the basic objectives of the project. Other relevant provisions set forth in the CEQA Guidelines (14 CCR 15000 et. seq.) state that EIRs neither need to consider every conceivable alternative to a project nor are they required to consider alternatives that are infeasible.

In addition to attaining most of the objectives of the Project and lessening significant effects of the Project, the development of alternatives was based on potential feasibility. Potential site locations were selected based on a number of planning, environmental, design, and engineering criteria. A reasonable range of potentially feasible alternatives is presented in this section, describing their impacts and benefits.

7.4 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER STUDY

In accordance with CEQA Guidelines Section 15126.6(f)(2), an alternative project site location should be considered if development of another site is feasible, and if development of another site would avoid or substantially lessen significant impacts of the Proposed Project. Factors that may be considered when identifying an alternative site location include the size of the site, its location, the General Plan (or Community Plan) land use designations, and availability of infrastructure. CEQA Guidelines Section 15126.6(f)(2)(A) states that a key question in looking at an off-site alternative is "whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location." Further, CEQA Guidelines Section 15126.6(f)(1) states that among the factors that may be taken into account when addressing the feasibility of alternative locations are whether the project proponent can reasonably acquire, control, or otherwise have access to the alternative site (or whether the site is already owned by the proponent).

An effort was made to identify an alternative location for the project. The selection criteria were developed to identify potential alternative project sites that would be fairly easy to acquire, and large enough to accommodate the proposed uses. When looking for the alternative sites, the following criteria were used:

- Alternative site had to be within the identified market area
- Land had to be privately owned and located adjacent to existing IID water infrastructure

With these considerations in mind, the Multiple Smaller Reservoirs Alternatives and Alternative Site Locations were considered during the early planning stages and prior to identifying the preferred site for the Proposed Project.

Multiple Smaller Reservoirs

The Multiple Smaller Reservoirs Alternative would construct seven smaller reservoirs on privately owned agricultural parcels instead of a single large reservoir. These reservoirs would be smaller in size, and each would be operated by the landowner of the land on which the reservoir is located. The Multiple Smaller Reservoirs Alternative was developed to provide an alternative to the

Proposed Project that would benefit the local farmers and provide nearby farms with a plentiful, independent water supply.

An alternative site would have to feasibly accomplish most of the basic objectives of the project. The project objectives require that the project benefit the greatest number of downstream IID water users, maximize system-wide water deliveries, and provide the greatest opportunity to store returned flows that are backed out of main system canals. This alternative would partially accomplish the project objectives of supporting on-farm efficiency conservation measures and minimizing displacement of existing IID and farming infrastructure. However, this alternative would not accomplish the remaining project objectives. This alternative would only provide a few landowners with increased water deliveries, thus leaving the remaining water supply infrastructure as is and not resulting in a significant amount of water conservation. Additionally, the construction of seven separate reservoirs would likely result in higher greenhouse gas (GHG) emissions and construction noise levels due to the increase in construction duration, compared to the construction of one reservoir. Therefore, the need for additional evaluation of this alternative was rejected from further consideration.

Alternative Site Locations

IID considered 11 sites, including the Proposed Project site, prior to identifying the site preferred for the Proposed Action. However, 10 of these alternative sites were quickly eliminated as prospective sites due to one or more of the following reasons: the hydraulic conditions of the site are not adequate to be redeveloped as a reservoir and supporting infrastructure, the site is located on BLM property and inside an ACEC, or the site was considered financially infeasible. The 10 alternatives site locations considered but eliminated from further evaluation are listed below.

1. North of Anza Road, east of Bowker Road, and southwest of the AAC.
2. North of the AAC, east of Claverie Road, south of Carr Road, and west of SR 7
3. North of the AAC, east of Hawk Road and south of the 98
4. North of the Mexico Border, south of the AAC, approximately 1 mile southeast of Bonesteele Road
5. Southeast of Holdridge Road, approximately 0.25 mile north of SR-98
6. Northwest of Holdridge Road, approximately 0.15 mile southeast of the EHL Canal
7. Southwest of Holdridge Road, approximately 0.7 mile southeast of the EHL Canal
8. South of Desert Road, approximately 0.7 mile northeast of Verde School Road
9. North of SR-98, approximately 1.15 east of Holdridge Road
10. South of SR-98, approximately 4 miles northwest of the SR-98 and I-8 intersection

7.5 ALTERNATIVES IDENTIFIED AND ANALYZED

7.5.1 No Project Alternative

The No Project Alternative is the scenario under which the Proposed Project is not permitted, constructed, or implemented. The No Project Alternative provides a basis for comparison of the environmental consequences of the proposed action. It is defined as "existing environmental conditions" as well as what would reasonably be expected to occur in the foreseeable future if the Proposed Project were not approved, based on current plans and consistent with available infrastructure (14 CCR 15126.6(e)(2)). In this EIR, the No Project Alternative assumes that the Project would not occur and the existing East Highline Canal would be operated and maintained in its current condition and none of the project objectives would be met.

Under the No Project Alternative construction of the Proposed Project would not be conducted and the existing site conditions would remain as is. The agricultural land would continue to be farmed or be brought back into production and, similar to the surrounding agricultural uses, the site would continue receiving water supplies by diverting water from the East Highline Canal and the AAC. The No Project Alternative would not accomplish or further the goals of the QSA, which reallocates conserved Colorado River water among IID (including SDCWA), CVWD, and MWD. As stated in Section 1.3.2, Program EIR for the Implementation of the Colorado River Quantification Settlement Agreement, of this EIR, the implementation of the QSA would result in a net reduction of Colorado River diversions to California. The No Project Alternative would also not achieve the goal of increasing operational storage to more effectively manage IID's daily water diversions at the Colorado River. As such, with implementation of this alternative, operational efficiency and conservation efforts for Imperial County water supplies would not be maximized.

Environmental Analysis

Aesthetics

Under the No Project Alternative, no development would occur and no changes to the existing visual conditions of the Proposed Project area would occur. Therefore, there would be no aesthetic impacts from the No Project Alternative.

Agricultural and Forestry Resources

Under the No Project Alternative, no development would occur and no changes to the existing land use conditions of the Proposed Project area would occur. Therefore, no impacts to agricultural and forestry resources would result from the No Project Alternative.

Air Quality

The No Project Alternative would generate no construction or operational air quality impacts since the Proposed Project area would remain in its current state and no construction would occur. Therefore, the No Project Alternative would result in no air quality impacts.

Biological Resources

Under the No Project Alternative, no development would occur and no changes to the existing biological resource condition of the Proposed Project area would occur. Therefore, no impacts to biological resources would result from the No Project Alternative.

Cultural Resources

Under the No Project Alternative, no development would occur and no changes to the existing condition of the Proposed Project area would occur. Therefore, no impacts to cultural resources would result from the No Project Alternative.

Energy

The No Project Alternative would not consume energy for construction or operation since the Proposed Project area would remain in its current state and no construction would occur. Therefore, the No Project Alternative would result in no energy impacts.

Geology and Soils

Under the No Project Alternative, no development would occur and no changes to the existing condition of geology and soils of the Proposed Project area would occur. Therefore, no impacts to geology and soils would result from the No Project Alternative.

Greenhouse Gas Emissions

The No Project Alternative would generate no construction or operational GHG emissions impacts since the Proposed Project area would remain in its current state and no construction would occur. Therefore, the No Project Alternative would result in no GHG emissions impacts.

Hazards and Hazardous Materials

Under the No Project Alternative, no development would occur and no hazardous substances or wildfire hazards would be introduced to Proposed Project area. Therefore, no impacts from hazards or hazardous materials would result from the No Project Alternative.

Hydrology and Water Quality

The No Project Alternative would not result in any impacts related to hydrology or water quality, since no construction would occur and there would be no increase in runoff from the Proposed Project area. Therefore, the No Project Alternative would result in no impacts to hydrology and water quality.

Land Use and Planning

Under the No Project Alternative, no development would occur and the Proposed Project site would retain its existing land use and zoning designations. Therefore, no impacts to land use and planning would result from the No Project Alternative.

Mineral Resources

Under the No Project Alternative, no development would occur and no changes to the existing condition of the Proposed Project area would occur. Therefore, no impacts to mineral resources would result from the No Project Alternative.

Noise

Under the No Project Alternative, no construction or development would occur. Further, the use of construction equipment and other noise-generating construction activities would not occur. Therefore, no noise impacts would result from the No Project Alternative.

Population and Housing

Under the No Project Alternative, no development or population growth would occur within the Proposed Project area. Therefore, no impacts to population and housing would result from the No Project Alternative.

Public Services

Under the No Project Alternative, no development or population growth that would generate any demand for public services or need for additional public service infrastructure would occur within the Proposed Project area. Therefore, no impacts to public services would result from the No Project Alternative.

Recreation

Under the No Project Alternative, no new parks or recreational facilities would be provided, and no new or increased demand for parks and recreational facilities would occur, since no new population would be introduced or generated by this alternative. Therefore, no impacts to recreation would result from the No Project Alternative.

Transportation and Traffic

The No Project Alternative would have no impacts on transportation or traffic since the Proposed Project area would remain in its existing condition. Therefore, no impacts to transportation and traffic would result from the No Project Alternative.

Tribal Cultural Resources

Under the No Project Alternative, no development would occur and no changes or soil disturbance activities to the existing condition of the Proposed Project area would occur. Therefore, no impacts to tribal cultural resources would result from the No Project Alternative.

Utilities and Service Systems

Under the No Project Alternative, no development or population growth that would generate any demand for utilities and service systems or need for additional utilities infrastructure would occur within the Proposed Project area. Therefore, no impacts to utilities and service systems would result from the No Project Alternative.

Wildfires

Under the No Project Alternative, no development or construction would occur within the Proposed Project area that could increase fire hazard severity. Therefore, no impacts from wildfires would result from the No Project Alternative.

7.5.2 Larger Capacity Reservoir Alternative

As stated above, CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to 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.

As determined by this EIR, the Proposed Project would result in potentially significant impacts associated with air quality, biological resources, cultural resources, hazards and hazardous materials and tribal cultural resources. All significant impacts would be reduced to below significant levels with incorporation of mitigation measures presented in this EIR; therefore, the analyzed alternatives would only reduce potential impacts in severity. As described in Sections 4.1, Air Quality, and 4.3, Cultural Resources, the Proposed Project would result in significant impacts that would be mitigatable with **MM-AQ-1**, **MM-AQ-2,** and **MM-CR-1.** However, under the Larger Capacity Reservoir Alternative, the significant impacts to air quality would increase in severity with the higher volume of soil movement as would the potential impacts to cultural resources associated with deeper excavation.

The Larger Capacity Reservoir Alternative would have the storage capacity of up to approximately 3,400 acre-feet of water, be constructed over an area of approximately 340 acres of agricultural land accommodated by a deeper embankment at a height of up to 15 feet. Compared to the proposed 440-acre reservoir, the Larger Capacity Reservoir would cover approximately 100 acres less, with 1,300 acre-feet more water capacity. By reducing the footprint and increasing the depth and height of the reservoir, potential impacts related to biological and agricultural resources are reduced. Despite meeting all the Project objectives, the increased depth and capacity would be subject to State jurisdictional dam requirements and under State criteria have an increased potential of flooding risk if failure were to occur. Although the Larger Capacity Reservoir Alternative would meet all of the project objectives, it would not be preferred over the Proposed Project due to the potential for flood risk.

Environmental Analysis

Aesthetics

The Larger Capacity Reservoir would cover approximately 100 acres less land than the Proposed Project and would have higher berm and embankment heights than the Proposed Project. With physical height increased, the Larger Capacity Reservoir Alternative would result in slightly increase impacts to the visual character of the surrounding agricultural landscape. Therefore, while the Proposed Project would not result in significant impacts to aesthetics, the Larger Capacity Reservoir Alternative would result in marginally increased aesthetic impacts compared to the Proposed Project but at less than significant levels.

Agricultural and Forestry Resources

With physical development lessened by approximately 100 acres, the deeper and Larger Capacity Reservoir Alternative would result in reduced impacts to the agricultural uses on the Proposed Project site. Similar to Proposed Project, there will be no impacts to forestry resources. Therefore, while the Proposed Project would not result in significant impacts to agricultural and forestry resources, the Larger Capacity Reservoir Alternative would result in reduced impacts to agricultural and forestry resources compared to the Proposed Project.

Air Quality

With physical development increased, the Larger Capacity Reservoir Alternative would result in more construction, soils disturbance and operational emissions and thereby slightly increase air quality impacts compared to the Proposed Project. Therefore, while the Proposed Project would not result in significant impacts to air quality with implementation of **MM-AQ-1** and **MM-AQ-2**, the Larger Capacity Reservoir Alternative would result in slightly increased air quality impacts compared to the Proposed Project but at a less than significant impact level with implementation of the same mitigation measures.

Biological Resources

With physical development lessened by 100 acres, the Larger Capacity Reservoir Alternative would result in fewer impacts to biological resources. Therefore, while the Proposed Project would not result in significant impacts to biological resources with implementation of **MM-BIO-1** through **MM-BIO-8**, the Larger Capacity Reservoir Alternative would result in fewer impacts to biological resources compared to the Proposed Project.

Cultural Resources

With physical development lessened, acreage would be reduced but excavation depth would be increased under the Larger Capacity Reservoir Alternative which would result in comparable levels of potential impacts to cultural resources. There would be no change to the location of the proposed intake channel under the Larger Capacity Reservoir Alternative, therefore, while the Proposed Project would not result in significant impacts to cultural resources with implementation of **MM-CR-1** and **MM-CR-2**, the Larger Capacity Reservoir Alternative would result in similar potential impacts to cultural resources compared to the Proposed Project.

Energy

The Larger Capacity Reservoir Alternative would result in an overall increase with respect to size of embankment and overall excavation, thus construction energy consumption would increase slightly. Operationally energy would also increase due to an increase in managed water, thereby slightly higher energy impacts would occur compared to the Proposed Project. Therefore, while the Proposed Project would not result in significant impacts to energy consumption, the Larger Capacity Reservoir Alternative would result in slight and permanent increase on energy both during construction and while in operation when compared to the Proposed Project but at levels less than significant.

Geology and Soils

With physical development lessened by 100 acres, the deeper but Larger Capacity Reservoir Alternative would result in similar impacts to geology and soils. However, the Proposed Project is not expected to result in significant impacts to geology and soils, thus, the Larger Capacity Reservoir Alternative would result in similar impacts to geology and soils compared to the Proposed Project.

Greenhouse Gas Emissions

With physical development lessened by 100 acres, the deeper and Larger Capacity Reservoir Alternative would result in no change to operational emissions and increased construction related GHG emissions and thus a temporary modest increase in GHG emissions impacts would occur when

compared to the Proposed Project. Therefore, while the Proposed Project would not result in significant GHG emissions impacts, the Larger Capacity Reservoir Alternative would temporarily increase GHG emissions impacts during the construction period when compared to the Proposed Project but at levels less than significant.

Hazards and Hazardous Materials

With physical development lessened, the Larger Capacity Reservoir Alternative would result in increased construction but smaller area of disturbance and possibility reducing potential of disturbing pesticides, herbicides, and valley fever, and thereby reduced impacts from hazards and hazardous materials. Therefore, while the Proposed Project is not expected to result in significant impacts from hazards and hazardous materials with implementation of **MM-HAZ-1** through **MM-HAZ-3** and **MM-AQ-1 and MM-AQ-2**, the Larger Capacity Reservoir Alternative would result in reduced impacts relating to hazards and hazardous materials compared to the Proposed Project.

Hydrology and Water Quality

With physical development lessened by 100 acres, the deeper, Larger Capacity Reservoir Alternative would result in a slight increase to construction activity and impacts to hydrology and water quality within the Project area associated with grading activities. Therefore, while the Proposed Project would not result in significant impacts to hydrology and water quality, the Larger Capacity Reservoir Alternative would increase impacts modestly to hydrology and water quality compared to the Proposed Project, but not to a level of significance.

Land Use and Planning

The Proposed Project would not result in inconsistencies with the County Zoning Ordinance or significant impacts to land use and planning. Because the Larger Capacity Reservoir Alternative would occupy the same parcels of land, thus it would result in similar impacts to land use and planning as the Proposed Project.

Mineral Resources

With physical development lessened by 100 acres, the deeper but Larger Capacity Reservoir Alternative would result in similar impacts to mineral resources. Therefore, while the Proposed Project is not expected to result in significant impacts to mineral resources, the Larger Capacity Reservoir Alternative would result in similar, less than significant impacts to mineral resources.

Noise

The deeper and Larger Capacity Reservoir Alternative would result in more construction noise due to larger embankments and deeper excavation. The operational noise generation would be the same as the Proposed Project. Therefore, while the Proposed Project would not result in significant

impacts from noise generation, the deeper and Larger Capacity Reservoir Alternative would result in temporary, longer noise impacts compared to the Proposed Project but not to any significant levels.

Population and Housing

Construction of the deeper and Larger Capacity Reservoir Alternative would likely require a similar level of construction workers than would the Proposed Project, these new jobs would be locally sourced and would not result in population growth. Similarly, both the Larger Capacity Reservoir Alternative and the Proposed Project would not displace people or demolish existing housing. Therefore, although development would be slightly decreased in acreage under the Larger Capacity Reservoir Alternative, this alternative would result in similar less-than-significant impacts to population and housing as compared to the Proposed Project.

Public Services

Construction of the Larger Capacity Reservoir Alternative would likely require a similar level of construction workers when compared to the Proposed Project. These new jobs would be locally sourced and would not result in population growth that would increase demand on public services. Similarly, construction of both the Larger Capacity Reservoir Alternative and Proposed Project may result in increased need for fire and police protection that would be negligible. Therefore, although development would be decreased under the deeper, Larger Capacity Reservoir Alternative, this alternative would result in similar less-than-significant impacts to public services as compared to the Proposed Project.

Recreation

Construction of the deeper, Larger Capacity Reservoir Alternative would likely require a similar level of construction workers than would the Proposed Project, these new jobs would be locally sourced and would not result in population growth that would increase demand on nearby recreation facilities. Similarly, construction of both the Larger Capacity Reservoir Alternative and the Proposed Project do not include development of recreation facilities. Therefore, although development would be decreased in acreage under the Larger Capacity Reservoir Alternative, this alternative would result in similar less-than-significant impacts to recreation as compared to the Proposed Project.

Transportation and Traffic

Construction of the Larger Capacity Reservoir Alternative would likely require a similar level of construction workers and daily vehicle trips than would the Proposed Project, existing traffic volumes in the vicinity are low and no road improvements are proposed that would introduce traffic congestion or hazards. The same roadway relocation improvements would be necessary

under both the Larger Capacity Reservoir Alternative and the Proposed Project. Similarly, construction and operation of the Larger Capacity Reservoir Alternative would not result in population growth, new construction, or any other changes that would affect traffic. Therefore, although development would be decreased in acreage under the Larger Capacity Reservoir Alternative, this alternative would result in similar less-than-significant impacts to transportation and traffic as compared to the Proposed Project.

Tribal Cultural Resources

With physical development lessened by 100 acres, acreage would be reduced but excavation depth would be increased under the Larger Capacity Reservoir Alternative which would result in comparable potential of impacts associated with new discoveries of tribal cultural resources. There would be no change to the location of the proposed intake channel under the Larger Capacity Reservoir Alternative, therefore, similar to the Proposed Project that would not result in significant impacts to cultural resources with implementation of **MM-CR-1 and MM-CR-2**, the Larger Capacity Reservoir Alternative would result in similar potential for new discoveries of tribal cultural resources compared to the Proposed Project with mitigation.

Utilities and Service Systems

Construction of the Larger Capacity Reservoir Alternative would likely require a comparable level of construction workers than would the Proposed Project. These new jobs would be locally sourced and would not result in population growth that would increase demand on utilities and service systems. Similarly, construction and operation of both the Larger Capacity Reservoir Alternative and Proposed Project would not increase the amount of wastewater produced, or increase the demands for water supplies in the area since this alternative and the Proposed Project would not introduce a new population to the area and by contrast both would augment water supplies. Therefore, this alternative would result in similar less-than-significant impacts to utilities and service systems as compared to the Proposed Project.

Wildfires

The Larger Capacity Reservoir Alternative would be located in the same area as the Proposed Project, and no development or construction would occur within a statewide responsibility area or land classified as very high fire hazard severity zone. Therefore, similar to the Proposed Project, Larger Capacity Reservoir would not increase fire hazard severity. Therefore, no impacts from wildfires would result from the Larger Capacity Reservoir Alternative.

7.5.3 Alternative Intake Routes Alternative

The Alternative Intake Routes Alternative, as shown on Figure 3-1, would entail siting the proposed reservoir basin in the same location; however, the intake routes would connect directly to the AAC farther east of where the proposed intake route is connecting with the AAC Reach. These alternatives considered would extend northwest from the AAC to the proposed reservoir basin. The first alternative intake route would traverse through BLM lands (ACEC Intake Alternative). This alternative would avoid impacts related to the proposed intake route's intersection with the American Drain Drain 2/2A, which would include biological impacts. The ACEC Alternative Intake would also use gravity to channel water to the proposed reservoir, similar to the Proposed Project, but at the most ideal hydrological conditions and continuing to meet all project objectives.

However, due to location within a sensitive ACEC, and limited access, biological resource surveying was not completed for the potential placement of the ACEC Intake Alternative. As determined by this EIR, the Proposed Project would result in potentially significant impacts associated with air quality, biological resources, cultural resources, and hazards and hazardous materials. All significant impacts of the Proposed Project would be reduced to below significant levels with incorporation of mitigation measures presented in this EIR; therefore, the analyzed ACEC Intake Alternative may potentially increase impacts in severity.

Two additional gravity flow intake route alternatives were considered, the originally preferred intake route (Original Intake Alternative) and the Mesa 5 Intake Alternative, both depicted on Figure 3-1. The proposed intake channel at either of these locations would remove agricultural land and also interrupt the irrigation systems supporting that agriculture, including the All-American Drain 2/2A similar to the Proposed Project. However, both of these intake alternatives would require an SR 98 detour resulting in potential significant impacts to newly discovered tribal cultural resources. These intake alternatives analyzed would result in unavoidable impacts to tribal cultural resources and therefore not preferred over the Proposed Project, despite meeting project objectives.

As described in Section 4.2, Biological Resources, and Section 4.3, Cultural Resources, the Proposed Project would result in impacts to jurisdictional resources associated with impact the All-American Drain 2 along the proposed intake route. The proposed intake channel would remove agricultural land and also interrupt the irrigation systems supporting that agriculture, including the All-American Drain 2, shown on Figure 4-2. Although avoiding these resources and infrastructure would not lower a CEQA threshold, it would lessen the interference with existing infrastructure.

Given the amount of biological resources identified within the Project study area, the likelihood of encountering biological resources under the Proposed Project Alternative Intake Route would be lower. Additionally, considering the cultural resources report prepared for the Proposed Project, a scatter of prehistoric ceramic buffware fragments, as well as other previously identified resources, would be unavoidable and directly impacted by all of the three alternative intake route

locations via the SR 98 detour that would need to be accommodated. Impacting cultural resources under any of the Alternative Intake Routes would be unavoidable. Therefore, although these Intake Alternatives would still meet all the project objectives, none of the intake channel alternatives would be considered the Environmentally Superior Alternative.

Environmental Analysis

Aesthetics

The Intake Route Alternative(s) would develop a reservoir basin to the same extent as the Proposed Project; however, the proposed intake channel would extend south from the reservoir at one of several locations, and connect directly to the AAC, traversing through SR-98 via underground culverts. The visual quality of the land adjacent to SR-98 would be affected by the Alternative Intake Route and be more exposed from public view, to drivers on SR-98. Although the Proposed Project would not impact aesthetics of the area, the alternative intake route would have an increased impact on the visual quality compared to the proposed intake channel that connects to an AAC Reach north of SR-98 within the existing Reclamation land that already has a number of facilities, including a communication tower and a hydro-plant. Although SR-98 is not designated as a scenic highway, slight increase in aesthetic impacts would result from the Intake Route Alternative(s) in comparison to aesthetics of the Proposed Project but nonetheless continue at a less than significant level.

Agricultural and Forestry Resources

The Intake Route Alternative(s) would develop the intake route farther east of the proposed intake route. In doing so, the Intake Route Alternatives would continue to disrupt and convert the existing agricultural use to the proposed intake channel but at shorter distances as the route shift easterly. Similar to the Proposed Project, the Intake Route Alternative(s) would not be located on Williamson Act contract land, forest land, timberland, or timberland production land. Although the Proposed Project would not result in significant impacts to agricultural, impacts to agricultural resources as a result of any of the Intake Route Alternatives would be decreased and be less than significant.

Air Quality

The Intake Routes Alternative(s) would be under 1.5 miles in length, in comparison to the proposed intake route, which would be approximately 2 miles in length. However, a temporary SR-98 detour would need to be constructed, approximately 2 miles in length. Therefore, with implementation of any of the Intake Route Alternatives, construction of approximately 0.5 miles of intake channel would be avoided but two miles of highway detour would be required, which would slightly increase the pollutants from construction activities. Operations of the Intake Route Alternative(s) would result in comparable effects regarding air quality, as this alternative would also use gravity

flows to route the intake water to a reservoir of the same size. While the Proposed Project would not result in significant impacts to air quality with implementation of **MM-AQ-1** and **MM-AQ-2**, the Intake Route Alternative(s) would result in slightly increased severity of air quality impacts compared to the Proposed Project that continue to be at a less than significant level with the same mitigation measure implementation.

Biological Resources

The Alternative Intake Routes would be located farther east inclusive of BLM lands as depicted on Figure 3-1. Given the amount of biological resources identified within the Proposed Project area, the likelihood of encountering biological resources in closer proximity to or within the BLM lands would be increased. Although the potential for additional specific biological resources is unknown, the likelihood of additional impacts to biological resources is lower under the Proposed Project, and reduced with the implementation of the identified mitigation measures for the Proposed Project. Therefore, impacts related to biological resources would be increased in severity under the Alternative Intake Route Alternative, but would be mitigated to less than significant, similar to the Proposed Project.

Cultural Resources

The Intake Route Alternative(s) would locate the intake farther east and connecting directly to the AAC, requiring an SR-98 Detour during construction. The SR-98 Detour under any of the Intake route Alternative(s) would directly impact previously identified cultural resources within federal lands. Although there are known previously identified resources in the federal land area that would be impacted by the Proposed Project, the resources would be avoided with implementation of **MM-CR-1** and **MM-CR-2** resulting in less than a significant impact. Under any of the Intake Route Alternatives, regardless of mitigation; the likelihood of impacting cultural resources is unavoidable due to the SR-98 Detour route that would be required by the California Department of Transportation. Therefore, potential impacts related to cultural resources would be increased in severity under the Intake Route Alternative(s) in comparison to the Proposed Project.

Energy

The Intake Route Alternative(s) would result in approximately 0.5 miles of less constructed intake channel. However, any of the Intake Route Alternative(s) would require the temporary construction of an approximate 2-mile detour for SR-98. Therefore, energy consumption resulting from construction of any of the Intake Route Alternatives would increase in comparison to the Proposed Project. Operational energy consumption would be similar to the Proposed Project, therefore, while the Proposed Project would not result in significant impacts to energy consumption, the Intake Route Alternative(s) would result in slightly increased energy impacts compared to the Proposed Project that would remain at a less than significant level.

Geology and Soils

There are no active faults within the Proposed Project area or the Intake Route Alternative(s) area which remain in the same general vicinity. Similar to the Proposed Project, the Intake Route Alternative(s) would implement structural design measures that reduce liquefaction risk, as well as complying with any recommendations in the geotechnical report and applicable regulations within the California Building Code. Therefore, implementation of any of the Intake Route Alternative(s) would not result in significant impacts to geology and soils, similar to the Proposed Project.

Greenhouse Gas Emissions

The Intake Route Alternative(s) would be approximately 0.5 miles shorter, in comparison to the Proposed Project's intake route. However, any of the Intake Route Alternative(s) would traverse SR-98 for a direct connection to the AAC and thus require the temporary construction of an approximate 2-mile detour for SR-98. Therefore, GHG emissions resulting from construction of any of the Intake Route Alternative(s) would increase in comparison to the Proposed Project. Once operational, the Intake Route Alternative would operate in the same way as the Proposed Project. Therefore, the Intake Route Alternative(s) would result in increased impacts related to GHG emissions that would be temporary and less than significant, when compared to the Proposed Project.

Hazards and Hazardous Materials

Similar to the Proposed Project, the Intake Route Alternative(s) would all continue to impact agricultural uses along the course of the proposed intake channel. The length of the intake channel disturbance under the Intake Route Alternative(s) would have a disturbance area reduced by approximately 0.5 miles, which would therefore reduce the severity of potential impact as a result of construction on agricultural land. However, the reservoir would be constructed in the same location, which is located on agricultural land, and **MM-HAZ-1** through **MM-HAZ-3** would still apply to any of the Intake Route Alternative(s) that would similarly reduce any potential impacts to less than significant. Therefore, the Intake Route Alternative(s) would result in slightly reduced impacts related to hazards and hazardous materials compared to the Proposed Project. Operations of the Intake Route Alternative would be comparable to the Proposed Project; therefore, operational impacts related to hazards and hazardous materials would be similar.

Hydrology and Water Quality

The Alternative Intake Route Alternative would consist of a main canal off-line reservoir storage project in the same location as the Proposed Project and an intake channel located farther east of the proposed intake channel. Under the Intake Channel Alternatives, a direct connection would be made to the AAC to accommodate the intake channel. Similar to the Proposed Project, the Alternative Intake Route Alternative would comply with the Construction General Permit, and no wells or direct connections to the underlying aquifers are proposed for project construction or operations, and any dust control actions

would utilize water imported via water trucks. Therefore, construction and operations of the Alternative Intake Route Alternative would not interfere with groundwater resources or local groundwater recharge. Lastly, the Alternative Intake Route would not be located within a 100-year flood hazard area and would be more than 45 miles from a dam. Therefore, the Alternative Intake Route Alternative would result in similar impacts related to hydrology and water quality as the Proposed Project.

Land Use and Planning

The Intake Route Alternative(s) would consist of a main canal off-line reservoir storage project in the same location as the Proposed Project and an intake channel located farther east than the proposed intake channel, but still within the existing agricultural land use designations. The Intake Route Alternative(s) would continue to remain within the same zoning designations as the Proposed Project which are compatible uses. Therefore, the Intake Route Alternative(s) would not result in any impacts to land use and planning similar to the Proposed Project.

Mineral Resources

The Intake Route Alternative(s) would consist of a main canal off-line reservoir storage project in the same location as the Proposed Project and an intake channel located farther east than the proposed intake channel, within agricultural land. No mineral resources have been identified and no active mineral recovery is underway or historically known for the area, which would limit the potential for mineral recovery. Therefore, the Intake Route Alternative(s) would result similarly in no impacts to mineral resources.

Noise

The Intake Route Alternative(s) would relocate the intake channel farther east of the intake channel location under the Proposed Project, but continue within agricultural land. While the Intake Route Alternative would result in approximately 0.5 miles less intake channel being constructed, the proposed Project would continue to remain at similar distances from sensitive receptors(150 feet) that would result in less than significant impacts. Therefore, both the Proposed Project and any of the Intake Route Alternative(s) would not result in significant impacts from noise generation. Considering the reservoir would be the same location and size as under the Proposed Project, the project design features proposed to further reduce construction noise for the project would still apply to the Intake Route Alternative(s). Therefore, any of the Intake Route Alternative(s) would result in comparable, less than significant, noise impacts during operations.

Population and Housing

Construction of the Intake Route Alternative(s) would likely require a similar number of construction workers, who would be locally sourced, which would not result in population growth. Similarly, both the Intake Route Alternative(s) and the Proposed Project would not displace people or demolish

existing housing. Therefore, any of the Intake Route Alternative(s) would result in less-than-significant impacts to population and housing, similar to the Proposed Project.

Public Services

Construction of any the Intake Route Alternative(s) would likely require a similar number of construction workers, who would be locally sourced, which would not result in population growth that would increase demand on public services. Similarly, construction of either the Intake Route Alternative(s) and the Proposed Project may result in increased need for fire and police protection. Therefore, the Intake Route Alternative would result in similar less-than-significant impacts to public services in comparison to the Proposed Project.

Recreation

The Intake Route Alternative(s) would result in the same acreage for the reservoir basin, with the intake channel located farther east than the proposed intake, within agricultural land. Construction of the any of the Intake Route Alternative(s) would likely require a similar number of construction workers, who would be locally sourced, which would not result in population growth that would increase demand on nearby recreation facilities. Similarly, construction of both the Intake Route Alternative and the Proposed Project would not include development of recreation facilities. Therefore, the Intake Route Alternative(s) would result in similar less-than-significant impacts to recreation as the Proposed Project.

Transportation and Traffic

As with the Proposed Project, existing traffic volumes in the vicinity are low and the Holdridge Road reroute would continue to impact local traffic but would not introduce traffic congestion or hazards. Construction of the Intake Route Alternative(s) would likely require a similar number of construction workers and daily vehicle trips. However, the Intake Route Alternative(s) would all traverse SR 98 to connect directly to the AAC and all require the temporary construction of an approximate 2-mile detour for SR-98. Therefore, temporary impacts to transportation and traffic would increase while any of the Intake Route Alternative(s) are under construction, when compared to the Proposed Project. Impacts under the Intake Route Alternative(s) would require an Encroachment Permit and Detour Plan and mitigation measures through the California Department of Transportation in order to mitigate impacts to a less than significant level, which are not necessary under the Proposed Project. Operation of the Intake Route Alternative(s) would not result in population growth, new construction, or any other changes that would affect traffic. Therefore, the Intake Route Alternative(s) would result in slightly increased impacts during construction than the Proposed Project that would require additional mitigation so that any potential impacts from transportation and traffic are less than significant.

Utilities and Service Systems

Construction of the Intake Route Alternative(s) would likely require a similar number of construction workers, who would be locally sourced, which would not result in population growth that would increase demand on utilities and service systems. Similarly, construction and operation of both the Intake Route Alternative(s) or Proposed Project would not increase the amount of wastewater produced, or increase the demand for water supplies in the area, since this alternative and the Proposed Project would not introduce a new population to the area. Therefore, any of the Intake Route Alternative(s) would result in similar less-than-significant impacts to utilities and service systems as the Proposed Project.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this case, the environmentally superior alternative is the Larger Capacity Reservoir Alternative.

7.7 COMPARISON OF ALTERNATIVES

Table 7-1 summarizes the potential impacts identified for alternatives in comparison with those identified for the Proposed Project. The table addresses each of the alternatives. The Larger Capacity Reservoir Alternative would continue to meet most of the project objectives. This alternative would construct a large operational reservoir, up to 3,400 acre-feet capacity, that would utilize an intake route that would avoid cultural resources, with the most beneficial hydrologic conditions, and support on-farm efficiency conservation measures. The Larger Capacity Reservoir Alternative would result in decreased agricultural, biological, and cultural effects. However, due to the potential flood risks from failure of higher embankments, the Larger Capacity Reservoir would fall under the jurisdictional authority of the Department of Water Resources and Division of Safety of Dams.

Table 7-1
Summary of Impacts for Each Alternative

Environmental Issue	Project	No Project Alternative	Larger Capacity Reservoir Alternative	Alternative Intake Route Alternative
Aesthetics	Less than significant	Less than Proposed Project, no impact	Increased impact compared to the Project, less-than-significant impact	Increased impact compared to the Project, less-than-significant impact
Agricultural and Forestry Resources	Less than significant	Less than Proposed Project, no impact	Less than Proposed Project, less-than-significant impact	Less than the Proposed Project, less-than-significant impact
Air Quality	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Biological Resources	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Less than Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Cultural Resources	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Similar impacts compared to the Project, less-than-significant impact with incorporation of mitigation	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Energy	Less than significant	Less than Proposed Project, no impact	Increased impact compared to Project, less-than-significant impact	Increased impact compared to Project, less-than-significant impact
Geology and Soils	Less than significant	Less than Proposed Project, no impact	Similar to Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Greenhouse Gases	Less than significant	Less than Proposed Project, no impact	Increased impacts compared to Project, less-than-significant impact	Increased impacts compared to Project, less-than-significant impact
Hazards and Hazardous Materials	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Less than Proposed Project, less-than-significant impact with incorporation of mitigation	Less than Proposed Project, less-than-significant impact with incorporation of mitigation
Hydrology and Water Quality	Less than significant	Less than Proposed Project, no impact	Increased impacts compared to Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Land Use and Planning	Less than significant	Less than Proposed Project, no impact	Similar to Proposed Project, less-than-significant impact	Similar to Proposed Project, less-than-significant impact
Mineral Resources	Less than significant	Less than Proposed Project, no impact	Similar to Proposed Project, less-than-significant impact	Similar to Proposed Project, less-than-significant impact
Noise	Less than significant	Less than Proposed Project, no impact	Increased impacts compared to Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact

Table 7-1
Summary of Impacts for Each Alternative

Environmental Issue	Project	No Project Alternative	Larger Capacity Reservoir Alternative	Alternative Intake Route Alternative
Population and Housing	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Public Services	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Recreation	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Transportation/ Circulation	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Tribal Cultural Resources	Less than significant with incorporation of mitigation	Less than Proposed Project, no impact	Similar impacts compared to the Project, less-than-significant impact with incorporation of mitigation	Increased severity compared to the Project, less-than-significant impact with mitigation incorporated
Utilities and Service Systems	Less than significant	Less than Proposed Project, no impact	Similar impacts as Proposed Project, less-than-significant impact	Similar impacts as Proposed Project, less-than-significant impact
Wildfire	No Impact Not Applicable	No Impact Not Applicable	No Impact Not Applicable	No Impact Not Applicable
Meets Most of the Basic Project Objectives?	Yes	No	Yes	Yes

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CHAPTER 8
REFERENCES

Section **Page No.**

APPENDICES

No Appendices

FIGURES

No Figures

TABLES

No Tables

CHAPTER 8
REFERENCES

1 INTRODUCTION

IID (Imperial Irrigation District). 2002. *IID Water Conservation and Transfer Project Draft EIR/EIS Habitat Conservation Plan.* https://www.iid.com/water/library/qsa-water-transfer/environmental-assessments-permits/draft-eir-eis.

IID. 2023. Imperial Irrigation District: Website. https://www.iid.com.

MWD (Metropolitan Water District). 2015. "Overview and Mission." http://www.mwdh2o.com/WhoWeAre/Mission/Pages/default.aspx.

Reclamation (U.S. Bureau of Reclamation). 2018. "Lower Colorado Region: About Us." https://www.usbr.gov/lc/aboutus.html.

SDCWA (San Diego County Water Authority). 2018. *Quantification Settlement Agreement.* https://www.sdcwa.org/sites/default/files/qsa-fs.pdf.

2 ENVIRONMENTAL SETTING

County of Imperial. 2007. "Imperial County Land Use Plan." http://www.icpds.com/CMS/Media/LANDUSE-Map.pdf.

County of Imperial. 2007. Zoning Map 20. http://www.icpds.com/CMS/Media/ZONE20.pdf.

Loeffler, M.J., and J.L. Wescoat. 2017. "Colorado River." *Encyclopaedia Britannica* (online). Last updated March 9, 2017. https://www.britannica.com/place/Colorado-River-United-States-Mexico.

Reclamation (U.S. Bureau of Reclamation). 2018. "About Us – Fact Sheet." https://www.usbr.gov/main/about/fact.html.

RWQCB (Regional Water Quality Control Board). 2017. *Water Quality Control Plan Colorado River Basin – Region 7.* August 2017. https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/docs/bp032014/entire_basinplan_combined.pdf.

USGS (U.S. Geological Survey) 2016. *Colorado River Basin Focus Area Study*. https://water.usgs.gov/watercensus/CRB-FAS/index.html.

3 PROJECT DESCRIPTION

County of Imperial. 2007. "Imperial County Land Use Plan." http://www.icpds.com/CMS/Media/LANDUSE-Map.pdf.

County of Imperial. 2015. *Imperial County General Plan – Land Use Element.* County of Imperial, Planning & Development Services Department. Approved October 6, 2015. http://www.icpds.com/?pid=675.

Imperial Water Forum. 2012. *Imperial Region Integrated Regional Water Management Plan*. Prepared by GEI Consultants Inc. for the Imperial Water Forum. October 2012. http://imperialirwmp.org/2013%20Updates/finalirwmp.html.

4 ENVIRONMENTAL ANALYSIS

4.1 Air Quality

CARB (California Air Resources Board). 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October 2000. Accessed August 2016. http://www.arb.ca.gov/diesel/documents/rrpfinal.pdf.

CARB. 2005a. *Air Quality and Land Use Handbook: A Community Health Perspective*. April 2005. Accessed August 2018. http://www.arb.ca.gov/ch/landuse.htm.

CARB. 2005b. Salton Sea Air Basin. Accessed April 2019. https://www.arb.ca.gov/pm/pmmeasures/pmch05/saltons05.pdf.

CARB. 2016. "Glossary of Air Pollution Terms." CARB website. Accessed June 2016. https://ww2.arb.ca.gov/about/glossary.

EPA (U.S. Environmental Protection Agency). 2009. "Integrated Science Assessment for Particulate Matter." EPA/600/R-08/139F. Accessed September 2017. http://ofmpub.epa.gov/eims/eimscomm.getfile?p_download_id=494959.EPA. 2016. "Criteria Air Pollutants." July 21, 2016. Accessed August 2016. https://www.epa.gov/criteria-air-pollutants.

EPA. 2013. "Health Effects of Ozone Pollution." https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.

EPA. 2016. "Criteria Air Pollutants." https://www.epa.gov/sites/production/files/2015-10/documents/ace3_criteria_air_pollutants.pdf.

EPA. 2018. "EPA Region 9 Air Quality Maps and Geographic Information." Last updated September 28, 2018. Accessed August 2018. http://www.epa.gov/region9/air/maps/.

ICAPCD (Imperial County Air Pollution Control District). 2017. *CEQA Air Quality Handbook*.

ICAPCD. 2009. *Imperial Count State Implementation Plan for Particulate Matter Less Than 10 Microns in Aerodynamic Diameter*.

ICAPCD. 2017. *2017 State Implementation Plan for the 2008 8-Hour Ozone Standard*. https://www.arb.ca.gov/planning/sip/planarea/imperial/2017O3sip_final.pdf.

OEHHA (Office of Environmental Health Hazard Assessment). 2015. *Air Toxics Hot Spots Program, Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments*. Accessed August 2017. https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

4.2 Biological Resources

ACOE (U.S. Army Corps of Engineers). 1991. Comment letter dated August 20, 1991. Submitted to the U.S. Department of Interior, Bureau of Reclamation, Lower Colorado Regional Office. Signed by Johnathan Freedman, Chief, Southern Section, U.S. Department of the Army.

AOU (American Ornothologists' Union). 2018. "Check-List of North American Birds: List of the 2,127 Bird Species Known from the A.O.U. Check-List Area." Accessed March, 2018. http://checklist.aou.org/.

BLM (U.S. Bureau of Land Management). 2015. *DRECP BLM Land Use Plan Amendment and Final EIS*.

CDFG (California Department of Fish and Game). 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Populations and Natural Communities.

CDFW (California Department of Fish and Wildlife) 2018. Biogeographic Information Observation System. Accessed December, 2023. https://apps.wildlife.ca.gov/bios6/.

CDFW. 2018. *List of Vegetation Alliances and Associations: Hierarchical List of Natural Communities with Holland Types.* June 2022. Accessed June 2023. https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/List.

CDFG. 2012. Staff Report on Burrowing Owl Mitigation. https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843.

CDFG. 1998. Terrestrial Mammal Species of Special Concern in California. Accessed December 2023. https://www.nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=84508

CDFW (California Department of Fish and Wildlife). 2018a. Element Occurrence Query. California Natural Diversity Database (CNDDB). RareFind, Version 5.2.14 (Commercial Subscription). Sacramento: CDFW, Biogeographic Data Branch. Accessed February 2018. http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CNPS (California Native Plant Society). 2001. "CNPS Botanical Survey Guidelines." Published December 9, 1983; revised June 2, 2001. http://www.cnps.org/cnps/rareplants/pdf/cnps_survey_guidelines.pdf.

Crother, B.I. 2012. *Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in our Understanding*. 7th ed. Herpetological Circular No. 39. Ed. J.J. Moriarty. Shoreview, Minnesota: Society for the Study of Amphibians and Reptiles.

Cypher. 2002. "U.S. Fish and Wildlife Service General Rare Plant Survey Guidelines."

DOI (U.S. Department of the Interior). 1994. *Final Environmental Impact Statement/Final Environmental Impact Report for the All American Canal Lining Project*. Prepared for Imperial Irrigation District. March 1994.

Flat-Tailed Horned Lizard Working Group of Interagency Coordinating Committee. 2003. Flat-tailed Horned Lizard Rangewide Management Strategy 2003 Revision. https://www.fws.gov/carlsbad/TEspecies/Documents/Flattailed_horned_lizard/PDFs/RMS%20-%20Final%202003.pdf.

IID (Imperial Irrigation District). 2017. "HCP/NCCP Process." http://www.iid.com/water/library/qsa-water-transfer/environmental-assessments-permits/hcp-nccp-process.

Moyle, P.B. 2002. *Inland Fishes of California.* Berkeley: University of California Press.

NABA (North American Butterfly Association). 2001. "Checklist of North American Butterflies Occurring North of Mexico." Adapted from "North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies," eds. B. Cassie, J. Glassberg, A. Swengel, and G. Tudor. 2nd ed. Morristown, New Jersey: NABA. Accessed October 14, 2016. http://www.naba.org/pubs/enames2.html.

Ng, J., M.D. Giovanni, M.J. Bechard, J.K. Schmutz, and P. Pyle. 2017. "Ferruginous Hawk (*Buteo regalis*)." In *The Birds of North America Online*, edited by A. Poole. Ithaca, New York: Cornell Lab of Ornithology. December 15, 2017. https://birdsna.org/Species-Account/bna/species/ferhaw/introduction.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* Prepared by Robert F. Holland, PhD, for the State of California, The Resources Agency, Department of Fish and Game (October 1986). March 2008.

Penrod, K., P. Beier, E. Garding, and C. Cabanero. 2012. *A Linkage Network for the California Deserts*. Produced for the Bureau of Land Management and The Wildlands Conservancy. Fair Oaks, California: Science and Collaboration for Connected Wildlands. www.scwildlands.org and http://oak.ucc.nau.edu/pb1/.

Rincon. 2023. Supplemental Biological Assessment for the East Highline Reservoir and Intake Channel Project, Imperial County, California.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation, 2nd edition.* Sacramento: California Native Plant Society.

SDNHM (San Diego Natural History Museum). 2002. "Butterflies of San Diego County." Revised September 2002. Accessed October 14, 2016.

Smith, K.G., S.R. Wittenberg, R.B. Macwhirter, and K.L. Bildstein. 2011. "Hen/Northern Harrier (*Circus cyaneus/hudsonius*)." In *The Birds of North America* (P. G. Rodewald, editor). Ithaca, New York: Cornell Lab of Ornithology. https://doi.org/10.2173/bna.210.

USFWS (U.S. Fish and Wildlife Service). 1998. *Endangered Species Consultation Handbook*. March 1998. https://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf.

USFWS (U.S. Fish and Wildlife Service). 2023. Information for Planning and Consultation. Accessed December, 2023. https://ipac.ecosphere.fws.gov/

Wilson, D.E., and D.M. Reeder. 2005. *Mammal Species of the World: A Taxonomic and Geographic Reference*. 3rd ed. Baltimore, Maryland: Johns Hopkins University Press.

4.3 Cultural Resources

BLM (U.S. Bureau of Land Management). 2016. "Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands." Instruction Memorandum No. 2016-124 from N. Huag (Acting Assistant Director of Resources Planning) to all field office officials. July 8, 2016. Downloaded December 2017. https://www.blm.gov/policy/im-2016-124.

County of Imperial. 2016. *Imperial County General Plan – Conservation and Open Space Element.* March 8, 2016. http://www.icpds.com/CMS/Media/Conservation-&-Open-Space-Element-2016.pdf.

Rincon. 2023. Supplemental Cultural Resources Assessment for the East Highline Reservoir and Intake Channel Project, Imperial County, California.

Schaefer, J., and C. O'Neill. 2001. *The All-American Canal: An Historic Properties Inventory and Evaluation.* On file at the South Coastal Information Center, San Diego State University.

Strand. 1962. "Geologic Map of California: San Diego El Centro Sheet." Scale 1:250,000. California Division of Mines and Geology.

Willey and Phillips. 1958. *Method and Theory in American Archeology*. Chicago: University of Chicago Press.

4.4 Hazards and Hazardous Materials

BLM (U.S. Bureau of Land Management). 2010. *Final Environmental Impact Statement Imperial Valley Solar Project*. El Centro, California. July 2010.

CDPH (California Department of Public Health). 2017. *Epidemiologic Summary of Coccidioidomycosis in California, 2016*. June 2017. https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2016.pdf.

County of Imperial. 1997. *County of Imperial General Plan – Seismic and Public Safety Element.* Revised July 23, 1997. http://www.icpds.com/CMS/Media/Seismic-and-Public-Safety-Element.pdf.

DTSC (Department of Toxic Substances Control). 2021. "Envirostor." Database. Accessed April 11, 2023.

Imperial County OES. 2007. *Imperial County Operational Area: Emergency Operations Plan (EOP)*. http://www.government-fleet.com/handler/download.ashx?file=/fc_resources/documents/imperial-county-emergencyplanoperations.pdf.

4.5 Hydrology and Water Quality

County of Imperial. 1997. *Imperial County General Plan – Seismic and Public Safety Element*. Revised July 23, 1997. http://www.icpds.com/CMS/Media/Seismic-and-Public-Safety-Element.pdf.

DWR (California Department of Water Resources). 2016. California Dam Breach Inundation Maps. DWR, Division of Safety of Dams. https://fmds.water.ca.gov/maps/damim/.

FEMA (Federal Emergency Management Agency). 2016. Flood Insurance Rate Map Number FM06025C2125C.

IID (Imperial Irrigation District). 2018. *2016 Water Conservation Plan*. September 2018.

U.S. Climate Data. 2018. "Climate Imperial – California." https://www.usclimatedata.com/climate/imperial/california/united-states/usca0508.

4.6 Tribal Cultural Resources

County of Imperial. 1998. Imperial County Zoning Ordinance.

County of Imperial. 2015. *Imperial County General Plan – Land Use Element.* October 6, 2015. http://www.icpds.com/CMS/Media/Land-Use-Element-(2015).pdf.

IID (Imperial Irrigation District). 2017.

IID. 2019. "QSA – Water Transfer." IID website. https://www.iid.com/water/library/qsa-water-transfer.

5 EFFECTS FOUND NOT TO BE SIGNIFICANT

BLM (Bureau of Land Management). 1984. *Manual 8400 – Visual Resource Management.* April 1984.

BLM. 1986a. *Manual H-8410-1 – Visual Resource Inventory*. January 1986.

BLM. 1986b. *Manual 8431-1 Visual Contrast Rating*. January 1986.

Calexico International Airport. 2017. Figure 3b: Airport Land Use Compatibility Plan. Accessed March 8, 2017. http://www.icpds.com/CMS/Media/Calexico-International-Airport.pdf.

CARB (California Air Resources Board). 2014. First Update to the Climate Change Scoping Plan: Building on the Framework. May 2014. Accessed October 13, 2014. http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm.

CARB. 2017. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California's 2030 Greenhouse Gas Target. Accessed January 2017. https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf.

CNRA. 2009.

County of Imperial. 1993. *Imperial County General Plan – Water Element*. http://www.icpds.com/CMS/Media/Water-Element.pdf.

County of Imperial. 1997. *Imperial County General Plan – Seismic and Public Safety Element*. In *Imperial County General Plan*. http://www.icpds.com/CMS/Media/Seismic-and-Public-Safety-Element.pdf.

County of Imperial. 2008. *Imperial County General Plan – Circulation and Scenic Highways Element*. http://www.icpds.com/CMS/Media/Circulation-Scenic-Highway-Element-(2008).pdf.

County of Imperial. 2016. *Imperial County General Plan – Conservation and Open Space Element*. http://www.icpds.com/CMS/Media/Conservation-&-Open-Space-Element-2016.pdf.

County of Imperial. 2015. *Imperial County General Plan – Land Use Element.* October 6, 2015. http://www.icpds.com/CMS/Media/Land-Use-Element-(2015).pdf.

County of Imperial. 1998. Imperial County Zoning Ordinance.

DOC (Department of Conservation). 2013. Williamson Act Maps San Diego County. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/San_Diego_w_13_14_WA.pdf.

DOC. 2014. California Farmland Mapping and Monitoring Program Map. http://maps.conservation.ca.gov/ciff/ciff.html.

DWR (Department of Water Resources). 2016. Best Available Maps: FEMA 100-year Flood Area. http://gis.bam.water.ca.gov/bam/.

IID (Imperial Irrigation District). 2018. "About IID Energy." https://www.iid.com/energy/about-iid-energy.

IID. 2019. "QSA – Water Transfer." IID website. https://www.iid.com/water/library/qsa-water-transfer.

IID. 2019. "Water Supply." https://www.iid.com/water/water-supply.

SCAG (Southern California Association of Governments). 2016. *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy*. http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

SCAQMD (South Coast Air Quality Management District). 2008. *Draft Guidance Document – Interim CEQA Greenhouse Gas Significance Thresholds*. October 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-6/ghg-meeting-6-guidance-document-discussion.pdf.

USDA (U.S. Department of Agriculture). Web Soil Survey. USDA Natural Resources Conservation Service, Soil Survey Staff. Accessed November 19, 2019. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx

6 OTHER CEQA CONSIDERATIONS

USCB (U.S. Census Bureau). 2017. "Quick Facts Imperial County." https://www.census.gov/quickfacts/fact/table/imperialcountycalifornia/LFE041216#viewtop.

7 ALTERNATIVES

County of Imperial. 2016. *Imperial County General Plan – Conservation and Open Space Element.* March 8, 2016. http://www.icpds.com/CMS/Media/Conservation-&-Open-Space-Element-2016.pdf.

DOC (Department of Conservation). 2013. Williamson Act Maps San Diego County. ftp://ftp.consrv.ca.gov/pub/dlrp/wa/San_Diego_w_13_14_WA.pdf.

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CHAPTER 9
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This Environmental Impact Report was prepared by the Imperial Irrigation District. The following professional staff participated in its preparation.

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