Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project

Draft Initial Study

Lead Agency:

City of Oceanside
Water Utilities Department
300 N. Coast Hwy
Oceanside, CA 92054

Prepared by:

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Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
AFY	acre-feet per year
ALUCP	Airport Land Use Compatibility Plan
BFE	Base Flood Elevation
BMPs	best management practices
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFG	California Fish and Game
CH_4	methane
CIP	clean-in-place
City	City of Oceanside
CMU	concrete masonry unit
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of San Diego
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DOC	California Department of Conservation
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
HFC	hydrofluorocarbon
HVAC	heating, ventilation, and air conditioning
IRA	Identified Resource Area
IS/MND	Initial Study/Mitigated Negative Declaration

L_{EQ}	noise equivalent level
LOS	level of service
MBGPF	Mission Basin Groundwater Purification Facility
MBTA	Migratory Bird Treaty Act
MCC	motor control center
MGB	Mission Groundwater Basin
MGD	million gallons per day
MHCP	Multiple Habitat Conservative Program
MRZ	Mineral Resource Zone
MT	metric ton
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
ND	Negative Declaration
NHPA	National Historic Preservation Act
NO_X	nitrogen oxides
NRHP	National Register of Historic Places
OMC	Oceanside Municipal Code
PFC	perfluorocarbon
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
PPV	peak particle velocity
RO	reverse osmosis
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SDG&E	San Diego Gas & Electric
sf	square foot/feet
SF_6	sulfur hexafluoride
SFHA	Special Flood Hazard Area
SIP	State Implementation Plan
SLR	San Luis Rey Band of Mission Indians
SMARA	Surface Mining and Reclamation Act
SR	State Route
SWPPP	Storm Water Pollution Prevention Plan
SWQMP	stormwater quality management plan
SWRCB	State Water Resources Control Board
SZ	Scientific Resource Zone

Acronyms and Abbreviations (continued)

TAC	toxic air contaminant
TCP	traffic control plan
TSRO	third stage reverse osmosis
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WMP	waste management plan

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INITIAL STUDY
City of Oceanside, California

1. PROJECT

Mission Basin Groundwater Purification Facility (MBGPF) Brine Minimization and Production Well Expansion Project (project or proposed project)

2. LEAD AGENCY

City of Oceanside, 300 N. Coast Hwy, Oceanside, CA 92054

3. CONTACT PERSON & PHONE

Kirill Dolinskiy, PMP, Project Manager
City of Oceanside, Water Utilities Department
(760) 435-5800

4. PROJECT LOCATION

The proposed project involves improvements at two locations, the City of Oceanside's (City's) existing MBGPF site and new production well (Well 12) site, both located within the City of Oceanside, San Diego County, California (Figure 1, *Regional Location*). The MBGPF site is located at 215 Fireside Street, approximately 0.4 mile north of State Route (SR) 76 (Figure 2, *Project Vicinity*). The proposed Well 12 site is located approximately 0.5 mile south of the MBGPF, along Mission Avenue and immediately east of the City's Fire Station No. 7, which is located at 3350 Mission Avenue (see Figure 2).

5. APPLICANT

City of Oceanside, Water Utilities Department, 300 N. Coast Hwy, Oceanside, CA 92054

6. GENERAL PLAN DESIGNATION

MBGPF site: Civic Institution (CI); Well 12 site: Community Commercial (CC)

7. ZONING

MBGPF site: Public and Semipublic (PS); Well 12 site: Community Commercial (CC)

8. PROJECT DESCRIPTION

The project is proposed by the City Water Utilities Department to improve production and increase utilization of the existing MBGPF. The City has a water portfolio that includes local supplies extracted from the Mission Groundwater Basin (MGB) through a system of eight groundwater production wells. Water extracted from the MGB is treated using reverse osmosis (RO) processes at the City's MBGPF (previously known as the Mission Basin Desalting Facility) for distribution to local users, providing 15 percent of the City's water supply.

Currently, the MBGPF, which was constructed in 1992, has a capacity of 6.4 million gallons per day (MGD). However, the capacity is not being fully utilized, with the average production since 2002 being 3.5 MGD and

peak production not exceeding 5.7 MGD, due to declining capacities at the existing well sites and overall wellfield in recent years. In addition, the current MBGPF RO process operates at a capacity of 75 percent water recovery, producing 1.5 MGD of brine (water with high salt concentrations). This brine is currently discharged to a 24-inch-diameter outfall line that conveys flow to the Pacific Ocean through the Oceanside Ocean Outfall.

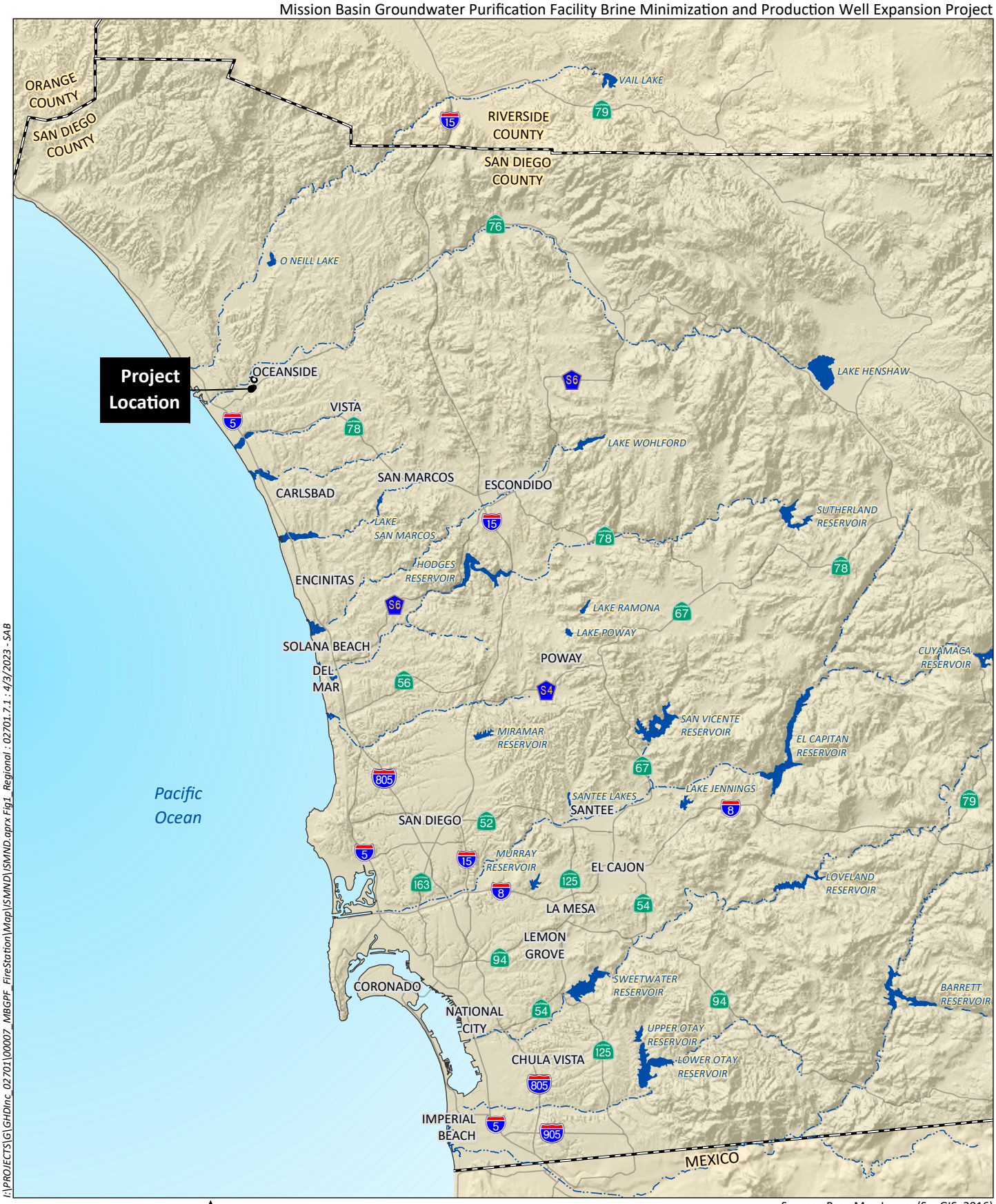
With the proposed project, the City aims to increase the utilization of the existing 6.4 MGD capacity of the MBGPF to bolster its supply of locally sourced water by (1) reducing the volume of brine produced and thus increasing the amount of product water recovered at the MBGPF and (2) increasing the amount of groundwater supplied to the MBGPF through installation of a new groundwater production well. The intent of the project is to increase MBGPF production by an estimated minimum of 881 acre-feet per year (AFY), including 431 AFY from the brine minimization and 450 AFY from the well expansion.

To reduce the volume of brine and increase the amount of product water recovered, the project would provide a third stage RO (TSRO) train to treat the brine from the existing primary RO train. The proposed TSRO-based brine minimization system would reclaim 40 to 50 percent of the water from the brine generated by two primary RO trains, which would be replaced and upgraded as part of this project. The new TSRO system would be fed by connecting to the primary RO trains brine line ahead of the valve that feeds to the outfall line, where the brine is currently discharged. The primary RO train brine would be treated at the TSRO system where additional product water would be extracted. The remaining brine from the TSRO system would be returned to the brine line ahead of the valve that feeds the outfall line to be discharged to the outfall.

The equipment would be located within a new 9,000-square-foot (sf) process building that would replace the existing 3,600-sf process building at the MBGPF. The new process building would be a 150-foot by 60-foot single-story, pre-engineered steel building with a wall height of approximately 19 feet. The process building would include a main process room with the new primary RO equipment, new TSRO equipment, modified RO clean-in-place (CIP) system, chemical storage area, and heating, ventilation, and air conditioning (HVAC) equipment; storage room; workshop area; fitness room; and motor control center (MCC) that contains electrical systems and equipment (Figure 3, *Proposed MBGPF Site Plan*, and Figure 4, *Proposed MBGPF Building Plan*). Access to the MBGPF would remain the same as the existing condition, which is provided by Heritage Street.

The new groundwater production well (Well 12) would be constructed on a City-owned parcel approximately 0.5 mile south of the MBGPF, adjacent to the City's Fire Station No. 7, in proximity to Wells 10 and 11. Well 12 would be equipped with a variable speed submersible pump and flows would be controlled hydraulically at the MBGPF. The well piping would be comprised of welded steel piping, a restrained flexible coupling, air release valves, gate and check valves, shut-off valves, butterfly valves with motor operators, flow meters to monitor the well's overall production, pressure sustaining valves, pressure gauges, and controls for the pump control valves. A control panel would be installed next to the wellhead and piping. A new pipeline to convey water extracted from the well would exit the well site towards Mission Avenue, head southwest within Mission Avenue towards Foussat Road, and then connect near Well 10 to the existing network of raw water piping that feeds the MBGPF.

Two drain options are currently being considered for the occasional need for flushing of Well 12. One option entails installation of approximately 1,000 linear feet of 18-inch-diameter reinforced concrete pipe within Mission Avenue, connecting the well to a storm drain located adjacent to Well 10. The second option is to drain to the adjacent on-site sewer manhole. Both options are considered in the environmental analysis contained within this Initial Study/Mitigated Negative Declaration (IS/MND). Electrical service would be provided by an existing utility service switchboard and pad mounted transformer at the site that serves Wells 10 and 11.



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Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 1

Project Site
Proposed MBGPF
Proposed Well 12 Site
Drain Line Option 1
Drain Line Option 2
Water Conveyance Pipeline

MBGPF Site Boundary
Well 12 Site Boundary
Well 11
Well 10
City Fire Station No. 7

Apricot Tree Way
Parkside Dr
Woodpark Way
Blossom Way
Santa Vela Dr
Santa Asis Dr
Espana Dr
Fredricks Ave
Los Arbolitos Blvd
Fireside St
C Emergency Dr
Lancer Ave
Warner St
Heritage St
Ricewood Dr
Rivertree Dr
Benet Rd
Foussat Rd
Foussat St
San Luis Rey River
Alex Rd
Mayfair St
76
Frontier Dr
Hacienda Dr
Flamingo Dr
Copperwood Way
Riviera Dr
Via De La Valle
Roymar Rd
Mission Ave
Tropicana Dr
Sahara Pl
Las Vegas Dr
Tonapah St
Carolyn Cir
Roberta Ln
Ely St

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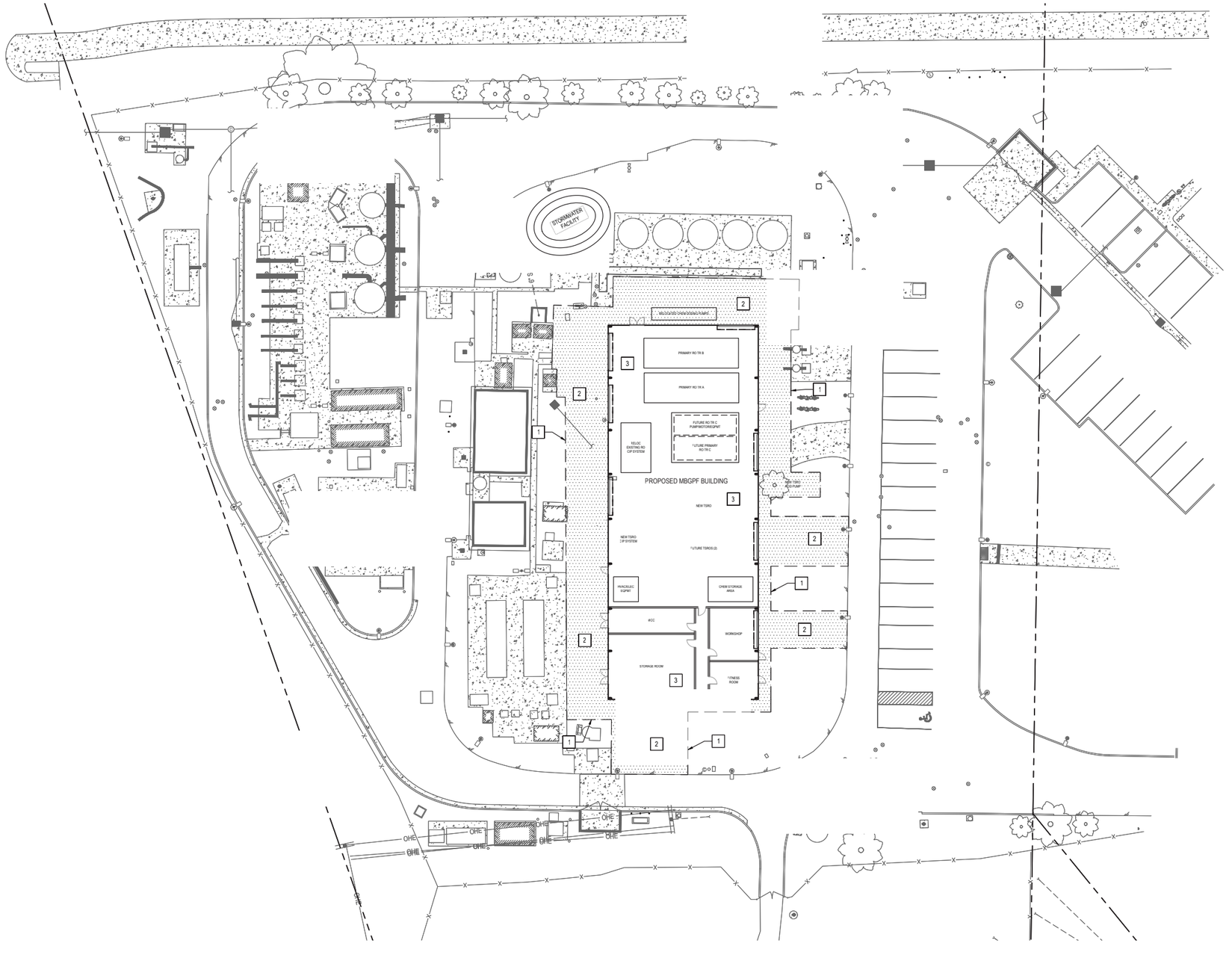
Source: Aerial (NearMap, 2019)

HELIX Environmental Planning

Project Vicinity

Figure 2



KEYNOTES

1. SAWCUT EXISTING PAVEMENT
2. PROPOSED PAVEMENT
3. PROPOSED MBGPF BUILDING

N

0 10' 20' 40'

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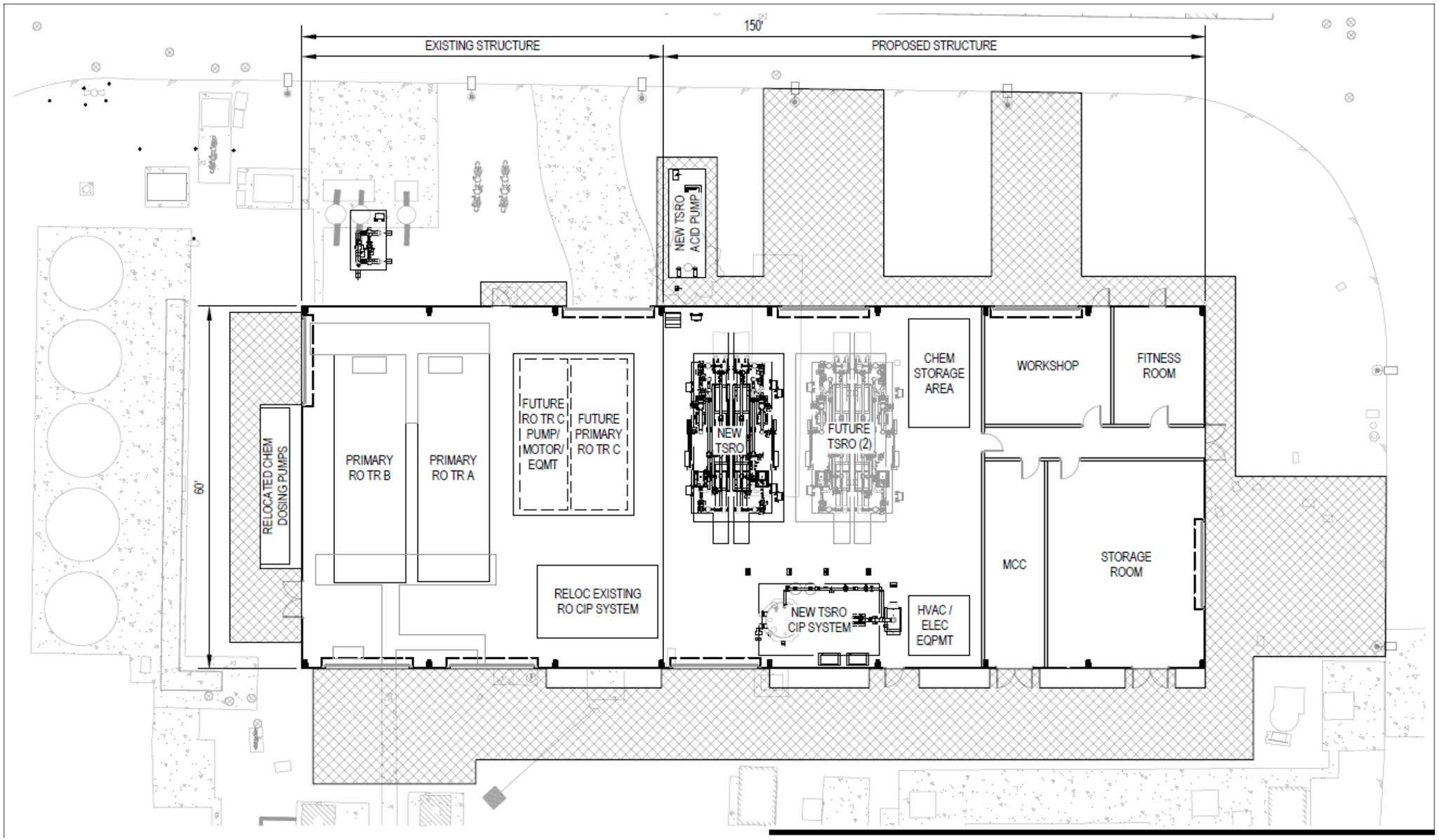
Source: GHD Inc. 2023

HELIX Environmental Planning

Proposed MBGPF Site Plan

Figure 3



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Source: GHD Inc. 2023

HELIX Environmental Planning

Proposed MBGPF Building Plan

Figure 4

In addition to the above-mentioned well structure and associated infrastructure, the Well 12 site would include a horizontal surge tank and emergency backup generator that would be located on concrete pads and pedestals. These components would be surrounded by an eight-foot-tall concrete masonry unit (CMU) enclosure measuring 25 feet by 65 feet with one 4-foot-wide personnel entry gate and two 10-foot-wide vehicular access gates. This enclosed area would be surrounded by pavement to allow for access to the well. Primary access would be provided from Mission Avenue, with an additional egress route connected to the fire station driveway that would be used by occasional large trucks that would not be able to turn around within the well site after entering from Mission Avenue (Figure 5*, Proposed Well 12 Site Plan*).

Additionally, the eight existing wells would be upgraded with variable frequency drives to better control the well pumping. This may require the installation of new electrical panels at each well site.

Construction activities for upgrades to the MBGPF and installation of the new Well 12 would include site preparation, demolition of existing structures and hardscape, grading, underground utility installation, structure construction, and paving. Staging and storage for project construction would occur within the project site boundaries shown on Figure 2.

9. PROJECT SETTING AND SURROUNDING LAND USES

The existing MBGPF site is developed with an operations building, RO process building, groundwater production wells, and associated water filtration and conveyance facilities. The footprint of the proposed upgraded MBGPF includes the existing RO building and asphalt pavement. The site is surrounded by open space and Fireside Park to the north, single-family residential uses to the east, and a San Diego Gas and Electric (SDG&E) easement and undeveloped land with a land use designation of commercial to the south and west (Figure 2). The San Luis Rey River is located further to the west. A flood control channel immediately borders the north and east sides of the MBGPF site.

The proposed Well 12 site is currently undeveloped and contains disturbed habitat. The site is bound by SR 76 to the north, Mission Avenue to the east and south, and the City's Fire Station No. 7 to the west. Commercial uses are located across Mission Avenue to the south.

10. OTHER REQUIRED AGENCY APPROVALS

The City is the Lead Agency pursuant to the California Environmental Quality Act (CEQA). The proposed project would require discretionary approval from multiple agencies. These agencies and their permits/ approvals are identified in Table 1, *Required Permits and Approvals.*

Table 1: Required Permits and Approvals

Approving Agency	Approval
City of Oceanside	Grading Permit; Stormwater Quality Management Plan; Conditional Use Permit; Building Permit; Haul Route Permit; Traffic Control Plan; Right-of-Way Permit; Discharge Permit,[1] Application for Address Assignment; Entitlement Application; Flood Evaluation
San Diego County Air Pollution Control District (SDAPCD)	Air Quality Permit
San Diego County Department of Environmental Health	Groundwater Well Construction Permit
State Water Resources Control Board (SWRCB) Division of Drinking Water	Drinking Water Source Assessment Program; Drinking Water Supply Permit[1]

[1] If necessary.

11. PREVIOUS ENVIRONMENTAL DOCUMENTATION

An IS and Negative Declaration (ND) were adopted by the City in July 1991 for the original 2-MGD Mission Basin Desalting Facility Project. In January 1998, an IS and ND were prepared for the expansion of the Mission Basin Desalting Facility to a production capacity of 6.37 MGD.

In December 2012, the "Mission Basin Groundwater Purification Facility–Facility Needs Assessment" was completed by Carollo Engineers to identify and prioritize improvement projects for the facility. Improvements included a new operations building and two 5-MGD desalination treatment facilities.

12. CONSULTATION

Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

In accordance with Assembly Bill (AB) 52, the City sent letters to initiate consultation to 29 tribal contacts on July 13, 2023. The Rincon Band of Luiseno Indians (Rincon) and the San Luis Rey Band of Mission Indians (SLR) requested consultation per AB 52. City staff met with Rincon on September 21, 2023 and with SLR on September 29, 2023 to discuss the project and solicit input from the tribes regarding tribal cultural resources in the project area. Rincon indicated the presence of a known resource in the area; the City and Rincon discussed potential project redesign and other alternatives to avoid impacts to cultural resources to the extent feasible. SLR indicated the cultural sensitivity of the project area and requested that archaeological and Native American monitoring be conducted during the project's ground-disturbing activities. Following the consultation meeting, SLR reviewed the project's proposed mitigation measures and indicated concurrence with the City that the measures adequately address the tribe's concerns. Consultation with SLR per AB 52 was concluded on November 16, 2023.

As part of the cultural resources survey conducted for the project, HELIX contacted the Native American Heritage Commission (NAHC) on February 16, 2021 for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in a response dated March 1, 2021 that the Sacred Lands File search was positive and recommended contacting the La Jolla Band of Mission Indians and the SLR. HELIX solicited input from SLR to adequately assess cultural sensitivity of the project area and identify potential impacts to tribal cultural resources from the project.

SHEET GENERAL NOTES

1. ONE TWO-WAY ACCESS DRIVEWAY THAT IS ACCESSIBLE FROM MISSION AVENUE (HWY 76). THIS DRIVEWAY WILL PROVIDE INGRESS/EGRESS FOR ALL VEHICLES INCLUDING CONSTRUCTION VEHICLES.
2. ONE TWO-WAY ACCESS DRIVEWAY CONNECTING TO THE CITY OF OCEANSIDE FIRE STATION 7 TO PROVIDE INGRESS/EGRESS FOR LARGE MAINTENANCE VEHICLES.
3. THIS PROJECT SITE IS SUBJECT TO THE FOLLOWING SETBACKS:
   - R/W = 10'
   - SSMH=100'

KEYNOTES

1. PROPOSED WELL #12
2. EXISTING SEWER MANHOLE
3. EXISTING FIRE HYDRANT
4. PROPOSED WELLHOUSE ENCLOSURE FOOTPRINT 65FT X 25FT
5. PROPOSED PAVEMENT
6. CONNECT TO EXISTING PAVEMENT
7. PROPOSED EXPANDED DRIVEWAY RETURN PER CITY OF OCEANSIDE STANDARD DRAWING M-10.
8. CONNECT TO EXISTING FIRE DEPARTMENT DRIVEWAY WITH A PERMEABLE PAVER ACCESS.

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Source: GHD Inc. 2023

HELIX Environmental Planning

Proposed Well 12 Site Plan

Figure 5

13. SUMMARY OF ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Unless Mitigated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural & Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology/Soils	☐ Greenhouse Gas Emissions	☐ Hazards/Hazardous Materials
☐ Hydrology/Water Quality	☐ Land Use & Planning	☐ Mineral Resources
☒ Noise	☐ Population/Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

14. ENVIRONMENTAL CHECKLIST

This section analyzes the potential environmental impacts which may result from the project. For the evaluation of potential impacts, the questions in the Initial Study Checklist are stated and answers are provided according to the analysis undertaken as part of the Initial Study. The analysis considers the project's short-term impacts (construction-related), and its operational or day-to-day impacts. For each question, there are four possible responses. They include:

1. *No Impact*. Future development arising from the project's implementation would not have any measurable environmental impact on the environment and no additional analysis is required.

2. *Less Than Significant Impact*. The development associated with project implementation would have the potential to impact the environment; these impacts, however, would be less than the levels or thresholds that are considered significant and no additional analysis is required.

3. *Potentially Significant Unless Mitigated*. The development would have the potential to generate impacts which may be considered as a significant effect on the environment, although mitigation measures or changes to the project's physical or operational characteristics can reduce these impacts to levels that are less than significant.

4. *Potentially Significant Impact*. Future implementation would have impacts that are considered significant, and additional analysis is required to identify mitigation measures that could reduce these impacts to less than significant levels.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.1 Aesthetics Except as provided in Public Resources Code Section 21099, would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic building within a state scenic highway?	☐	☐	☐	☒
c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

a. Have a substantial adverse effect on a scenic vista? **Less Than Significant Impact.**

Scenic vistas can be designated officially in a city's General Plan or be views that are valued by the local community. The City does not have an official inventory of scenic vistas in its General Plan, but the City's Local Coastal Plan Background Study recognizes resources such as the Pacific Ocean, San Luis Rey River, Buena Vista Lagoon, Oceanside Harbor, and Oceanside Pier as valuable aesthetic resources (City 2018). One scenic resource, the San Luis Rey River, is located near the project, approximately 0.25 mile west of the MBGPF site and 0.4 mile northwest of the Well 12 site. The MBGPF site is located between the San Luis Rey River and public areas along Fireside Street and Fireside Park; however, existing residences, vegetation, and structures at the MBGPF currently limit public views to the river. In addition, the project would replace an existing structure at the MBGPF site with a structure of similar height and size. As such, project improvements at the MBGPF would not have a substantial effect on a scenic vista. The Well 12 site is located between the San Luis Rey River and public areas along Mission Avenue; however, an embankment leading up to SR 76 currently eliminates potential public views of the river from the segment of Mission Avenue adjacent to the Well 12 site. As such, the installation of Well 12 would also not have a substantial adverse effect on a scenic vista. Impacts would be less than significant.

b. Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway? **No Impact.**

There are no designated scenic highways within the city. The nearest designated scenic highway, according to the California Department of Transportation (Caltrans), is a portion of SR 52 approximately 30 miles southeast of the project (Caltrans 2018). It is noted that SR 76 (Mission Road), which is 0.4 mile south of the MBGPF site and immediately north of the Well 12 site, is designated as an eligible scenic highway (Caltrans 2018); however, the project would replace an existing structure at the MBGPF site with a structure of similar height and size and would install a well at a disturbed site. The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a designated scenic highway. No impacts would occur.

c. Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? **Less Than Significant Impact.**

CEQA defines the term urbanized area to mean, among other things, an incorporated city that has a population of at least 100,000 persons or has a population less than 100,000 persons if the population of that city and not more than two contiguous incorporated cities combined equals at least 100,000 persons (Public Resources Code Section 21071). U.S. Department of Commerce, Bureau of the Census (U.S. Census Bureau) data from 2020 indicates that the City has a population of 174,068 persons (U.S. Census Bureau 2020). As such, the project is within an urbanized area and is therefore evaluated relative to applicable zoning and other regulations governing scenic quality. The MBGPF site is zoned Public and Semipublic and the Well 12 site is zoned Commercial. Improvements at the MBGPF site would involve replacement of an existing structure with a structure of similar height and size and would not introduce new land uses that would conflict with the underlying zoning or other regulations governing scenic quality. Similarly, the new Well 12 would be consistent with existing Wells 10 and 11 that are located on the adjacent parcel that is also zoned Commercial. The new Well 12 would therefore not introduce new land uses that would conflict with the underlying zoning or other regulations governing scenic quality. Impacts would be less than significant.

d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? **Less Than Significant Impact.**

Primary sources of light from development projects include light emanating from building interiors that passes through windows and light from exterior sources (e.g., street lighting, parking lot lighting, building illumination, security lighting, and landscape lighting). The introduction of light can be a nuisance by affecting adjacent areas and diminishing the view of the clear sky depending on the location of the light sources and their proximity to nearby light-sensitive areas. Glare impacts can occur because of artificial light or sunlight reflecting off a surface. Glare can create discomfort or present safety concerns.

The project would involve the replacement of an existing structure at the MBGPF with a structure that would include similar lighting (primarily exterior building illumination) and architectural materials (metal siding walls). This would be consistent with existing conditions and would therefore not create a new source of substantial light or glare. Lighting at the Well 12 site would be limited to security lighting, which would be minimal and would not represent a substantial new light source given the presence of streetlights along Mission Avenue and SR 76. The Well 12 site would also not include structures that cause substantial glare. In addition, all permanent lighting would comply with Oceanside Municipal Code (OMC) Chapter 39, Light Pollution Regulations, which restricts the use of certain outdoor light fixtures to protect the environment from the effects of light pollution.

In the short term, it is expected that drilling operations for construction of the well would involve 15 to 20 days of 24-hour work, which would result in the need for lighting during nighttime hours. Such lighting would be directed towards the on-site work being performed and would not represent a substantial new light source given the presence of streetlights along Mission Avenue and SR 76, as previously mentioned. In addition, there are no uses that would be particularly sensitive to nighttime lighting, such as residences, in the immediate facility of the Well 12 site. The nearest residences, located approximately 350 feet east of the Well 12 drilling location, would not be adversely affected by this lighting based on distance and intervening structures (buildings and a fence) and vegetation. The remainder of construction would occur during daytime hours when no additional lighting is needed. As such, the project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.2 Agricultural Resources In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance as depicted on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? **No Impact.**

According to the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP), most of the MBGPF site and all the Well 12 site are within areas designated as Urban and Built-Up Land, with a small portion of the MBGPF site mapped within Farmland of Local Importance (DOC 2022). Neither site is designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (DOC 2022). As such, implementation of the project would not result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No impact would occur.

b. Conflict with existing zoning for agricultural use, or a Williamson Act Contract? **No Impact.**

The Williamson Act applies to parcels within an established agricultural preserve consisting of at least 20 acres of Prime Farmland or at least 40 acres of land not designated as Prime Farmland. The purpose of the act is to preserve agriculture and open space lands by discouraging premature and unnecessary conversion to urban uses. The proposed project is primarily in an area of Urban and Built-Up Land, with a small portion of the MBGPF site mapped as Farmland of Local Importance. Land within the sites is not currently used for agriculture and is not zoned for agricultural use. No Williamson Act contracts apply (DOC 2022). As such, the project would not conflict with existing zoning for agricultural use or a Williamson Act Contract. No impact would occur.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? **No Impact.**

Forest land is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Riparian habitat can be considered forest land if it meets these criteria. Timberland is land, other than land owned by the federal government and designated by the California Department of Forestry and Fire (CAL FIRE) Board of Forestry as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. The MBGPF site is fully developed and the Well 12 site, while undeveloped, does not support native trees and is adjacent to a fire station and other developed uses in an urbanized area. The project sites are not zoned or used for forest land, timberland, or timberland production. No impact would occur.

d. Result in the loss of forest land or conversion of forest land to non-forest use? **No Impact.**

As stated above in response to Item 14.2(c), the project sites do not contain forest land. Therefore, the project would not cause the loss or conversion of forest land. No impact would occur.

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? **No Impact.**

There is no land currently utilized for agriculture or forestry purposes within or adjacent to the project. The project would therefore not involve changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.3 Air Quality Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☐	☐	☒	☐
c. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)?	☐	☐	☒	☐

a. Conflict with or obstruct implementation of the applicable air quality plan? **No Impact.**

The project is located within the San Diego Air Basin (SDAB), which is governed by the San Diego County Air Pollution Control District (SDAPCD). The SDAPCD develops and administers local regulations for stationary air pollutant sources within the SDAB, and develops plans and programs to meet attainment requirements for both federal and state ambient air quality standards (National Ambient Air Quality Standards [NAAQS] and California Ambient Air Quality Standards [CAAQS], respectively). The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the Ambient Air Quality Standards (AAQS) in the SDAB. The current regional air quality plan for San Diego County is SDAPCD's 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan; SDAPCD 2020). The Attainment Plan, which would be a revision to the state implementation plan (SIP), outlines SDAPCD's plans and control measures designed to attain the NAAQS for ozone. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the U.S. Environmental Protection Agency (USEPA) and California Air Resources Board (CARB), and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and SIP.

The Attainment Plan and SIP rely on SANDAG growth projections, which are based in part on city and county general plans. As such, projects that propose development consistent with the growth anticipated by the applicable general plan(s) are consistent with the Attainment Plan and applicable portions of the SIP. As discussed in Item 14.14(a), under Population and Housing, the proposed project does not include growth-generating components. As such, the project would not conflict with growth projections contained in the City's General Plan (2002) and thus, would be consistent with SANDAG forecasts. Furthermore, as discussed under Item 14.3(b) below, the project would not generate criteria pollutant emissions that would exceed SDAPCD thresholds during construction or operation. Therefore, the project would not conflict with the Attainment Plan or SIP. The project would not conflict with or obstruct implementation of an air quality plan, and no impact would occur.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard? **Less Than Significant Impact.**

The project would generate criteria pollutants in the short term during construction and the long term during operations. To determine whether a project would result in emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SDAPCD.

The project's criteria pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs.

Construction Emissions

Construction of the project would result in temporary increases in air pollutant emissions. These emissions would be generated in the form of fugitive dust emissions (i.e., respirable particulate matter 10 microns or less in diameter [PM_{10}] and fine particulate matter 2.5 microns or less in diameter [$PM_{2.5}$]) and ozone precursor emissions (nitrogen oxides [NO_X] and reactive organic gas [ROG]). Construction is expected to begin in August 2024 and extend through January 2026.

Construction emissions calculated using CalEEMod Version 2022.1 are provided in Appendix A to this Initial Study. The results of the calculations for project construction are shown in Table 2, *Construction Emissions*. The analysis assessed maximum daily emissions from individual construction activities for each project component, the MBGPF and Well 12. The modeling assumes the application of water on exposed areas twice per day during construction in compliance with SDAPCD Rule 55, *Fugitive Dust Control*.

Table 2: Construction Emissions

Phase	Maximum Daily Pollutant Emissions (pounds per day)					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
MBGPF						
Site Prep	0.5	4.8	5.9	<0.1	0.5	0.3
Demolition	0.6	4.9	6.3	<0.1	0.4	0.2
Grading	1.2	11.4	11.1	<0.1	2.7	1.5
Trenching	0.3	2.1	3.1	<0.1	0.1	0.1
Building Construction	0.5	5.2	7.1	<0.1	0.2	0.2
Paving	0.6	4.4	6.0	<0.1	0.3	0.2
Maximum Daily MBGPF Emissions	**1.2**	**11.4**	**11.1**	**<0.1**	**2.7**	**1.5**
Well 12						
Site Prep	0.5	5.0	5.9	<0.1	0.6	0.3
Demolition	0.5	4.8	6.3	<0.1	0.6	0.2
Grading	1.2	11.4	11.1	<0.1	2.7	1.5
Trenching	0.3	2.1	3.2	<0.1	0.1	0.1
Well Construction	0.5	5.0	7.8	<0.1	0.2	0.2
Paving	0.6	4.4	6.1	<0.1	0.3	0.2
Maximum Daily Well 12 Emissions	**1.2**	**11.4**	**11.1**	**<0.1**	**2.7**	**1.5**
Maximum Daily Concurrent Emissions[1]	**1.7**	**16.5**	**18.9**	**<0.1**	**3.2**	**1.8**
Threshold	**75**	**250**	**550**	**250**	**100**	**55**
Significant Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Source: CalEEMod (output data is provided in Appendix A)

[1] Maximum Daily Concurrent Emissions for ROG, NO_X, CO, and SO_X occur during the month of December 2024 when MBGPF grading overlaps with Well 12 building construction activities. Maximum Daily Concurrent Emissions of PM_{10} and $PM_{2.5}$ occur during the month of August 2024 when MBGPF site preparation overlaps with Well 12 grading activities.

ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides;
PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter

As shown in Table 2, emissions of criteria pollutants and precursors related to project construction would be below the significance thresholds. Therefore, impacts from criteria pollutants and precursors generated during construction would be less than significant.

Operational Emissions

The project involves the renovation and expansion of the existing MBGPF, which would not generate criteria pollutants significantly greater than existing conditions since there would be minimal changes, if any, to staff numbers and/or maintenance activities. The project also involves the installation of an emergency backup generator and construction of a new well; as such, the increase in operational emissions is limited to those associated with testing of the backup generator. Operational emissions for the backup generator were estimated using CalEEMod assuming an operating schedule for testing and maintenance of 15 minutes per day, once per month. Emissions of all criteria pollutants and ozone precursors were found to be less than one pound per day. Therefore, impacts from criteria pollutants generated during operation of the project would be less than significant.

c. Expose sensitive receptors to substantial pollutant concentrations? **Less Than Significant Impact.**

Sensitive populations (e.g., children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than are the general population. Land uses that are considered sensitive receptors typically include residences, schools, playgrounds, childcare centers, hospitals, convalescent homes, and retirement homes. The closest existing sensitive receptors to the project are the single-family residences located to the east of the MBGPF site along Fireside Avenue. An analysis of the project's potential to expose sensitive receptors to pollutants during construction and operation is provided below.

Toxic Air Contaminants

Diesel particulate matter (DPM) is the primary toxic air contaminant (TAC) that would be emitted during construction, particularly during use of off-road diesel equipment required for site grading and other construction activities. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The primary factor used to determine health risk to sensitive receptors is the amount of exposure, determined as a function of concentration in the environment and duration of exposure. DPM disperses rapidly with distance, the generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. The most intense use of construction equipment would be during the site preparation/grading phases, which are anticipated to last two months of the approximately 18-month construction period. Therefore, due to the short duration of construction activities and highly dispersive properties of DPM, project-related TAC emission impacts during construction would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

Carbon Monoxide Hotspots

A carbon monoxide (CO) hotspot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. If a project increases average delay at signalized intersections operating at level of service (LOS) E or F or causes an intersection that would operate at LOS D or better without the project to operate at LOS E or F with the project, a quantitative screening is required. The project would result in minimal, temporary traffic during construction (primarily consisting of worker commute trips) and no new trips during operation. The project would neither cause new severe congestion nor significantly worsen existing congestion. There would be no potential for a CO hotspot or exposure of sensitive receptors to substantial, project-generated, local CO emissions. Impacts would be less than significant.

d. Result in other emissions (such as those leading to odors adversely affecting a substantial number of people)? **Less Than Significant Impact.**

Minor amounts of odor compounds associated with diesel heavy equipment exhaust and volatile organic compounds (VOCs) would be emitted during construction of the project. The odors of these emissions may be considered objectionable; however, construction emissions would be minor and temporary. Odorous hydrocarbon emissions would dissipate beyond the emissions sources and would only affect receptors in the immediate vicinity of the construction site. Construction-related operations would also be temporary in nature and would cease at the completion of construction. Therefore, construction activities would not result in nuisance odors. Odor impacts associated with construction would be less than significant.

Land uses that are typically associated with odor complaints include uses such as agricultural operations, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. The project would not include a land use typically associated with odor complaints. The proposed project would not result in other emissions, such as odor, which would adversely affect a substantial number of people. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.4 Biological Resources Would the project:				
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 state or federally protected wetlands (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 tree preservation policy/ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

The following discussion is based on the findings contained within the Biological Technical Report (HELIX 2023b) prepared for the proposed project. The study included a review of recent aerial imagery, soil survey data, U.S. Geological Survey topographic maps, U.S. Fish and Wildlife Service (USFWS) critical habitat maps, Final Multiple Habitat Conservation Program (MHCP) maps, and sensitive species information from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) and USFWS database records; general biological surveys conducted in February 2021 and June 2022; and a habitat assessment for the western burrowing owl conducted in 2022. The report details the existing biological conditions within the project sites and provides an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. The Biological Technical Report is included as Appendix B to this IS/MND.

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? **Potentially Significant Unless Mitigated.**

Plant Species

Special status plant species include species that are listed as threatened or endangered, proposed for listing, or are candidate species by USFWS or CDFW, or those with a California Rare Plant Rank (CRPR) 1 through 4 as designated by the California Native Plant Society (CNPS). Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be relatively abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations. No sensitive plant species were observed at the project sites during the general biological surveys conducted for the project. The highly disturbed nature of many of the project sites, combined with the restricted presence of suitable soil types for many species, limits the potential for rare plants to occur. In addition, no special status plant species have a moderate or high potential to occur within the project site due to a lack of suitable soil or habitat types. No impacts to special status plant species would occur.

Animal Species

Special status animal species include those that have been afforded special status and/or recognition by the USFWS, CDFW, and/or the City. In general, the principal reason an individual taxon (species or subspecies) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss. One special status animal species, monarch butterfly (*Danaus plexippus*), was observed at the Well 12 site during the general biological survey conducted at the site. The monarch butterfly is a federal candidate and CDFW special interest species. The project would not have a significant impact on monarch butterfly, as the project site does not support important overwintering habitat for this species (e.g., large stands of eucalyptus woodland) or host plants for breeding (e.g., milkweed).

Two other sensitive species, least Bell's vireo and Belding's orange-throated whiptail, were not observed during surveys but have a moderate and high potential to occur within 500 feet of the project sites, respectively. Suitable habitat for Belding's orange-throated whiptail includes coastal sage scrub, chaparral, juniper woodland, oak woodland, and grasslands, along with alluvial fan scrub and riparian areas. The occurrence of this species is also typically correlated with the presence of perennial plants, which occur within the project sites. Because Belding's orange-throated whiptail is highly mobile and project impacts are relatively small in scale, no significant impact to this species is anticipated.

Suitable nesting and foraging habitat for least Bell's vireo consists of riparian habitat with a structurally diverse canopy and dense shrub cover, which does not occur within the project sites but is present immediately north of the MBGPF project site within the San Luis Rey Corridor. No direct impacts are anticipated to occur to least Bell's vireo or its nesting habitat; however, indirect impacts could occur to this species if construction occurs during the breeding season (March 15 through September 15). Specifically, construction noise has the potential to exceed the applicable limit of an hourly average of 60 A-weighted decibels (dBA) at least Bell's vireo suitable habitat located north of the MBGPF site within the San Luis Rey River corridor. Should noise levels be exceeded during the nesting/breeding season for least Bell's vireo, impacts would be potentially significant. Mitigation measure BIO-1 would be implemented to reduce this impact to a less-than-significant level.

Nesting Birds

Existing vegetation within the project site that may be removed by the project provides potential nesting bird habitat. Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game (CFG) Code. If the project were to begin construction during the nesting season (generally February 15 to August 31 for most birds and January 15 through July 15 for raptors), potentially significant

direct and/or indirect impacts could occur to nesting birds or raptors. Mitigation measures BIO-2 and BIO-3 would be implemented to reduce impacts to a less-than-significant level.

Mitigation Measures

BIO-1 If construction activities are scheduled to occur during the least Bell's vireo breeding season (March 15 through September 15), a Qualified Biologist shall conduct pre-construction surveys to determine presence or absence of this species within 300 feet of work. The final survey shall not be completed more than seven days prior to the beginning of construction, clearing, grubbing, or grading activities. If it is determined at the completion of pre-construction surveys that active nests belonging to this species are absent within 300 feet of construction, construction shall be allowed to proceed. If any vireos are observed nesting or displaying breeding/nesting behavior during the pre-construction surveys, construction shall be postponed within 300 feet of any location at which vireos have been observed until a Qualified Biologist has determined that all nesting (or breeding/nesting behavior) has ceased or until after September 15.

Should construction need to proceed within 300 feet of nesting vireo during the breeding season, a monitoring plan shall be prepared by a Qualified Biologist for approval by the City, CDFW, and USFWS (collectively, the "Wildlife Agencies"). The monitoring plan shall include the following tasks:

- Weekly reports (including photographs of impact areas) submitted to the City and Wildlife Agencies during project construction within 300 feet of suitable vireo nesting habitat. The weekly reports shall document that authorized vegetation impacts were not exceeded, as well as general compliance with all project conditions.

- A noise study conducted by a Qualified Acoustician prior to construction activity during the breeding season to determine the ambient noise level at occupied vireo habitat. If the ambient noise level exceeds an hourly average of 60 dBA, the ambient noise level shall be used as the threshold for noise generated by the project's construction activities. Otherwise, a 60 dBA hourly average shall be used. Construction generated noise shall not exceed the applicable noise threshold. If the acoustician and biologist determine that the threshold is being exceeded, construction shall cease and the Qualified Biologist and City shall coordinate with the Wildlife Agencies to identify and implement measures to cease the exceedance (e.g., reduce the noise level to the ambient level or 60 dBA [whichever is greater] adjacent to habitat occupied by least Bell's vireo using sound walls and/or other measures approved by the Wildlife Agencies). Violations shall be reported to the Wildlife Agencies within 24 hours of occurrence.

- Preparation of a final report by the Qualified Biologist to be submitted to the City and Wildlife Agencies within 60 days of project completion. The final report shall include as-built construction drawings with an overlay of upland habitat that was impacted or preserved, photographs of upland areas to be preserved, and other relevant summary information documenting that authorized upland habitat impacts were not exceeded and that general compliance with all project conditions occurred. The City Planner and City Engineer shall verify the implementation of this mitigation measure.

BIO-2 In order to avoid violation of the federal MBTA and California Fish and Game Code, construction activities such as grubbing or clearing of vegetation shall occur outside of the general avian breeding season (January 15 to July 15 for raptors and February 15 to August 31 for general nesting birds). If grubbing or clearing must occur during the general avian breeding

season within 300 feet of general nesting bird habitat or 500 feet of nesting raptor habitat, a Qualified Biologist shall conduct a pre-construction nesting bird survey no more than seven days prior to the commencement of the activities to determine if active bird nests are present on or near the construction and/or staging areas (including a 100-foot buffer) Survey results shall be submitted to the City. If there are no nesting birds (including nest building or other breeding/ nesting behavior) within this area, clearing and grubbing shall be allowed to proceed. If grubbing and/or clearing activities are delayed or suspended for more than seven days during the breeding season, surveys shall be repeated prior to re-initiating work. If active nests or nesting birds are observed during pre-construction surveys, a suitable avoidance buffer from the nests shall be determined by the Qualified Biologist based on species, location, and extent and type of planned construction activity. The Qualified Biologist shall flag buffers around the active nest buffers, and clearing and grubbing activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged, with results submitted to the City. Should removal of suitable nesting habitat (i.e., trees and vegetation) be required, it shall be conducted outside of the breeding bird season to avoid impacts to nesting birds.

BIO-3 If construction activities (including vegetation removal) are proposed during the raptor breeding season (generally January 15 through July 15), one pre-construction survey shall be conducted within the project site and a 100-foot buffer by a Qualified Biologist no more than one week prior to commencement of activities to look for active raptor nests. If none are found, no further mitigation shall be required. If an active nest is found, monitoring shall be conducted by the Qualified Biologist to ensure that all construction activities remain at least 500 feet from all active raptor nests. The Qualified Biologist shall also determine when the nest becomes inactive and construction activity can move closer to the nest site. The mapped pre-construction survey results shall be submitted to the Wildlife Agencies for review and approval prior to the initiation of vegetation removal from the site. The City shall submit the final plans for construction of the project to the Wildlife Agencies for approval at least seven days prior to the initiation of project impacts. The plans shall include photographs depicting the fenced limits of impact, as well as all areas on site that are to be avoided during project construction. The City Planner and City Engineer shall verify the implementation of this mitigation measure.

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? **Potentially Significant Unless Mitigated.**

A habitat is considered sensitive if it supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by CEQA Guidelines Section 15380, or is regulated by the USFWS, U.S. Army Corps of Engineers (USACE), CDFW, or the City. Four vegetation communities/land cover types occur within the project sites: non-native vegetation, disturbed habitat, developed land dominated by goldenbush (*Isocoma menziesii*), and developed land. None of these vegetation communities/land cover types is considered a sensitive vegetation community. Therefore, the project would not directly affect riparian habitat or a sensitive vegetation community. Potential indirect impacts related to surface water quality degradation and accidental removal of native vegetation during construction could occur to a small remnant patch of southern willow scrub that is surrounded by the MBGPF project site. Mitigation measures BIO-4 and BIO-5 would be implemented to reduce potential indirect impacts to a less-than-significant level.

Mitigation Measures

BIO-4 Potential impacts from degraded surface water quality shall be minimized to the maximum extent practicable by using best management practices (BMPs) for erosion/sedimentation control during construction. These BMPs may include, but are not limited to, the use of a bonded fiber

matrix, straw mulch, or erosion control blankets/mats to prevent erosion, and/or the installation of such items as silt fences or fiber rolls to catch eroded material before it can reach the adjacent off-site riparian area.

Potential impacts from equipment maintenance, staging, and dispensing of petroleum products and/or coolant during construction shall be minimized by adding or changing such products, if necessary, only within a designated construction staging area, within the existing disturbed areas, and conducted in such a manner as to prevent runoff from entering potentially jurisdictional waters. The addition or change of such products shall occur over plastic tarps, which, if contaminated, shall be disposed of in a safe and legal manner. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. Furthermore, BMPs such as those listed above for erosion/sedimentation control shall also be used at the staging areas.

BIO-5 The construction and construction staging area limits shall be clearly delineated with orange construction fencing and/or silt fencing, or staking and fiber rolls to ensure that construction activity remains within the defined limits of work and does not impact native habitat outside of the designated work area. A Qualified Biologist shall attend a pre-construction meeting and inspect the delineated work areas prior to the initiation of vegetation clearing/grading and during regularly scheduled construction monitoring visits.

c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? **No Impact.**

Jurisdictional waters and wetlands include those resources subject to the regulatory jurisdiction of the USACE pursuant to Section 404 of the federal Clean Water Act (CWA), the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, or CDFW pursuant to Sections 1600 et seq. of the CFG Code. Based on the results of the general biological survey and review of aerial imagery and historic disturbances on the property, there are no potentially jurisdictional resources regulated by the USACE, RWQCB, and/or CDFW within the project boundaries. No impacts related to direct removal, filling, hydrological, interruption or other effects to protected wetlands would occur.

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? **Less Than Significant Impact.**

The project site is not part of a regional wildlife corridor or linkage. The Well 12 site is surrounded by roads and development on all sides and is not shown as a Biological Core and Linkage Area on Figure 2-4 of the regional MHCP Subarea Plan (AMEC et al. 2003). The MBGPF site is adjacent to development to the east, powerline corridor and vacant land to the south and west with a construction site beyond the powerlines to the west, and park land to the north. While wildlife could use the powerline corridor and portions of the site to travel through the area, they would be unlikely to pass through the developed portion of the site where improvements are proposed. In addition, improvements at the MBGPF site would replace an existing facility and would not affect a wildlife corridor where one is currently present. Impacts would be less than significant.

e. Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy/ordinance? **No Impact.**

Project construction and operation would be restricted to areas that are highly disturbed and lack sensitive biological resources. While the project may include the removal of existing on-site trees, these trees are not considered protected as there is no local policy or ordinance that would apply. Therefore, the project would not conflict with such policies or ordinances and no impact would occur.

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? **Less Than Significant Impact.**

The project sites were evaluated for their overall biological quality and regional importance under the San Diego regional MHCP. Per review of the regional MHCP, the sites are mapped as developed per MHCP Figure 2-3, Composite Habitat Value; are not part of a biological core and/or linkage area; are not within proposed hardline or softline conservation lands as shown on MHCP Figure 3-1, Focused Planning Area; and are outside of the general area identified for core gnatcatcher conservation (AMEC et al 2003). The sites do not have regional importance under the MHCP, and their overall biological quality is low because they are small sites that are mostly developed and disturbed. The Well 12 site is also surrounded by existing developments and roadways. The project sites are mapped as within a Wildlife Corridor Planning Zone, and the MBGPF site is adjacent to a powerline corridor identified as hardline preserve by the draft Oceanside Subarea Plan, with a portion of the site mapped as Designated Preserves. However, the portion of the site where improvements are proposed is developed and does not function as wildlife habitat or a wildlife corridor. Moreover, it should be noted that the City has decided not to pursue adopting the Subarea Plan. Therefore, the project would not conflict with the provisions of the MHCP. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.5 Cultural Resources Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

The discussion below is based on the findings contained within the Cultural Resources Survey report (HELIX 2023b) prepared for the proposed project. The survey included a records search, Sacred Lands File search, a review of historic aerial photographs and maps, a field survey, and monitoring of geotechnical testing at potential well locations. The report details the methods and results of the survey and was prepared to comply with CEQA and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended. The Cultural Resources Survey report is included as Appendix C to this IS/MND.

a. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5? **Potentially Significant Unless Mitigated.**

Twenty-four cultural resources were identified within a one-mile buffer of the project during the records search conducted for the project, all of which are archaeological resources, as well as nine historic addresses (buildings that range in age of construction from the late nineteenth century to the mid-twentieth century). Of these 24 resources, one, CA-SDI-5445 (P-37-005445), is mapped as overlapping the project. Specifically, the Well 12 site is located within the mapped boundaries of CA-SDI-5445. Resource CA-SDI-5445 is a large (over 100 acres), significant cultural resource site that has been the subject of several surveys, testing, data recovery, and monitoring programs covering various portions of the site. The most salient details regarding this site are that an extensive subsurface deposit was recorded and excavated in conjunction with development of SR 76. Despite the large amount of cultural material recovered, this resource was originally assessed in 1991 as not eligible for the National Register of Historic Places (NRHP) due to the high degree of disturbance over many years, which served to drastically affect the integrity of the resource; however, the site was later found to have pockets of significant intact cultural deposits, as well as human remains. In addition, the site is of importance to the Luiseño community. Although not addressed in the site records, CA-SDI-5445 is part of the Luiseño village of San Luis Rey. Based on this information, the site is assumed eligible for the CRHR and NRHP, although it has not been formally evaluated after these finds. Therefore, there is potential for the project to affect historical resources as defined in Section 15064.5 of CEQA (i.e., significant cultural resources). The project would implement mitigation measures CUL-1 through CUL-9 to reduce potential impacts to historical resources to a less-than-significant level.

Mitigation Measures

CUL-1 Prior to the issuance of a Grading Permit, the Applicant/Owner shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe." A copy of the agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this agreement shall be to formalize protocols and procedures between the Applicant/Owner and the "Traditionally and Culturally Affiliated (TCA) Native American Monitor associated with a TCA Luiseño Tribe" for the protection and treatment of, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and **a**ll other ground-disturbing activities. At the discretion of the Luiseño Native American Monitor, artifacts may be made available for 3D scanning/printing, with scanned/printed materials to be curated at a local repository meeting the federal standards of 36CFR79.

CUL-2 Prior to the issuance of a Grading Permit, the Applicant/Owner or Grading Contractor shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor have been retained at the Applicant/Owner or Grading Contractor's expense to implement the monitoring program, as described in the pre-excavation agreement.

CUL-3 The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor during all ground-disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. The Applicant/Owner or Grading Contractor shall notify the City of Oceanside Planning Division of the start and end of all ground-disturbing activities.

CUL-4 The Qualified Archaeologist and Luiseño Native American Monitor shall attend all applicable pre-construction meetings with the General Contractor and/or associated Subcontractors to present the archaeological monitoring program. The Qualified Archaeologist and Luiseño Native American Monitor shall be present on-site full-time during grubbing, grading and/or other ground-altering activities, including the placement of imported fill materials or fill used from other areas of the project site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources.

CUL-5 In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the Luiseño Native American monitor, other TCA Luiseño Tribes that have participated in the state-prescribed process for this project, and the Applicant/Owner, subject to the approval of City representatives.

The Controlled Grade Procedure shall establish requirements for any ground-disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight and other characteristics of the earth-disturbing equipment. A copy of the Controlled Grade Procedure shall be included in the Grading Plan Submittals for the Grading Permit.

CUL-6 During the monitoring program, all ground disturbance (trenching/excavation/drilling) occurring within the boundaries of CA-SDI-5445 should be monitored full-time by a Qualified Archaeologist and Luiseño Native American Monitor, with screening of a sample of the soils occurring. The monitors will direct the pace of excavation within the archaeological site to allow sufficient time to thoroughly examine the soils and the trench sidewalls. In addition, to minimize impacts to cultural resources, it is recommended that trench widths be kept as narrow as feasible to accommodate the new or replacement pipelines.

CUL-7 The Qualified Archaeologist or the Luiseño Native American monitor may halt ground-disturbing activities if unknown tribal cultural resources, archaeological artifact deposits, or cultural features are discovered. Ground-disturbing activities shall be directed away from these deposits to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds these items shall be secured until they can be repatriated. If items cannot be securely stored on the project site, they may be stored in off-site facilities located in San Diego County. If the Qualified Archaeologist and Luiseño Native American monitor determine that the unearthed tribal cultural resource, artifact deposits, or cultural features are considered potentially significant, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. The avoidance and protection of the significant tribal cultural resource and/or unique archaeological resource is the preferable mitigation. If, however, it is determined by the City that avoidance of the resource is infeasible, and it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits, or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods.

The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor must be present during any testing or cataloging of those resources. Moreover, if the Qualified Archaeologist does not collect the tribal cultural resources that are unearthed during the ground-disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground-disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected.

CUL-8 The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground-disturbing activities, and from any previous archaeological studies or excavations on the project site to the appropriate TCA Luiseño Tribe, as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location on-site, in accordance with the Tribe's cultural and spiritual traditions. All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the Native American Heritage Commission per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation.

CUL-9 Prior to the release of the grading bond, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis, and conclusions of the archaeological monitoring program (e.g., data recovery plan) shall be submitted by the Qualified Archaeologist, along with the Luiseño Native American monitor's notes and comments, to the City of Oceanside Planning Division for approval.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? **Potentially Significant Unless Mitigated.**

Based on the high degree of cultural sensitivity of the project area, the presence of known archaeological resources (as discussed above in Item 14.5[a]), and the potential for unknown, buried cultural resources, there is potential for the project to affect archaeological resources pursuant to CEQA Section 15064.5. The project would implement mitigation measures CUL-1 through CUL-9 to reduce potential impacts to archaeological resources to a less-than-significant level.

c. Disturb any human remains, including those interred outside of formal cemeteries? **Potentially Significant Unless Mitigated.**

As discussed above in Item 14.5(a), human remains have been encountered within the project area. Based on the high degree of cultural sensitivity of the project area, the presence of known human remains, and the potential for unknown, buried human remains, there is potential for the project to affect human remains. The project would implement mitigation measure CUL-6 to reduce potential impacts to human remains to a less-than-significant level.

Mitigation Measures

CUL-10 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of

the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept in-situ, or in a secure location near where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two working days of being notified if the remains are subject to his or her authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall contact the Native American Heritage Commission (NAHC) within 24 hours. The NAHC shall decide as to the Most Likely Descendent.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.6 Energy Would the project:				
a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b. Conflict with or obstruct a state or local plan for renewable energy efficiency?	☐	☐	☒	☐

a. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? **Less Than Significant Impact.**

Energy consumed for project construction would primarily consist of fuels in the form of diesel and gasoline. Fuel consumption would result from: use of on-road trucks for the transportation of construction materials and water; construction worker vehicles traveling to and from the project site; and use of off-road construction equipment. While construction activities would consume petroleum-based fuels, consumption of such resources would be temporary and would cease upon the completion of construction. The petroleum consumed during project construction would be typical of similar projects and would not require use of new petroleum resources beyond those typically consumed in California annually for construction activities. Based on these considerations, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy resources, and the impact would be less than significant.

Operationally, the proposed MBGPF and Well 12 would require energy to operate. Such use of energy during operations would be similar to existing use for the MBGPF and other wells, and would be limited to necessary operations of the equipment. The operational energy usage would therefore not occur in a wasteful, inefficient, or unnecessary manner. In addition, the project would increase the City's supply of locally sourced water. Providing locally sourced water allows for a reduction in imported water, which is typically transported over long distances and thus requires high energy use. By increasing the supply of locally sourced water, the project would decrease the City's reliance on imported water thereby resulting in an offset of energy consumed. Impacts would therefore be less than significant.

b. Conflict with or obstruct a state or local plan for renewable energy efficiency? **Less Than Significant Impact.**

The most applicable energy-related plan to the proposed project is the City's Climate Action Pan (CAP; City 2019), which was adopted in 2019 as a part of their General Plan Update and includes development of a policy framework in the General Plan Energy and Climate Action Element. The CAP is intended to support statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, enhancing access to sustainable transportation modes, and encouraging other sustainable practices. The CAP builds on a variety of City projects that promote energy efficiency, increased renewable energy use, water conservation, and solid waste reduction (City 2019).

CAP Measure W3, Local Water Supply Development, calls for infrastructure improvements to increase the local supply of potable and recycled water. As discussed above, providing a local water supply decreases reliance on imported water, which requires high energy use for conveyance. The purpose of the proposed project is to increase the utilization of the existing MBGPF to bolster its supply of locally sourced water by a total of 881 AFY. That is, the purpose of the proposed project is to help implement CAP Measure W3. As such, the project would not conflict with the City's CAP and impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.7 Geology and Soils Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault (Refer to DM&G Pub. 42)? ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?	☐	☐	☒	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18- 1-B of the 1994 Uniform Building Code, creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐

Discussion in this section is based on the Geotechnical Evaluation completed by Ninyo & Moore (2022), included as Appendix D to this IS/MND. The Geotechnical Evaluation contains several recommendations that are designed to meet the criteria set forth in the California Building Code (CBC), which is adopted into the OMC as Chapter 6. Accordingly, these recommendations are required by the CBC and are incorporated as project design features that would be included as conditions of approval. Please refer to Appendix D for the specific recommendations.

a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

    i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area, or based on other substantial evidence of a known fault (Refer to DM&G Pub. 42)? **Less Than Significant Impact.**

There are no known active or potentially active faults in the city. The nearest known active fault to the project site is an offshore portion of the Newport-Inglewood Fault, located approximately seven miles west. There are no active faults underlying the project site, and the project site is not located in an Alquist-Priolo Earthquake Fault Zone. As such, the probability of fault rupture is considered negligible. No impact would occur.

    ii) Strong seismic ground shaking? **Less Than Significant Impact.**

As with most of southern California, the project is within a seismically active area, and therefore has the potential to be subject to strong seismic ground motion. However, design and construction of the project would comply with the seismic design parameters outlined in the CBC, which provides requirements for seismic safety based on factors such as occupancy type, on-site soil types, and the probable strength of ground motion. Compliance with the CBC would include the incorporation of: (1) seismic safety features to minimize the potential for significant effects as a result of earthquakes; (2) proper building footings and foundations; and (3) construction of the building structure so that it would withstand the effects of strong ground shaking. In addition, the City's Building Department would review the building plans through building plan checks, issuance of a building permit, and inspection during construction, which would ensure that the required CBC seismic safety measures are incorporated into project design. Compliance with the CBC and the Building Department's review process, permit application, and inspection would reduce impacts related to strong seismic ground shaking. Impacts would therefore be less than significant.

    iii) Seismic-related ground failure, including liquefaction? **Less Than Significant Impact.**

Liquefaction is the phenomenon in which loosely deposited granular soils with silt and clay contents of less than approximately 35 percent and non-plastic silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration results in the loss of grain-to-grain contact due to a rapid rise in pore water pressure, and causes the soil to behave as a fluid for a short period of time. Liquefaction is known generally to occur in saturated or near saturated cohesionless soils at depths shallower than 50 feet below the ground surface. Factors known to influence liquefaction potential include composition and thickness of soil layers, grain size, relative density, groundwater level, degree of saturation, and both intensity and duration of ground shaking.

According to the project's Geotechnical Evaluation (Ninyo & Moore 2022), the project vicinity is mapped as an area that is prone to liquefaction. The project sites are underlain by loose and medium dense fill soils and alluvium, and groundwater was encountered as shallow as approximately 17 feet below ground surface during borings conducted as part of the Geotechnical Evaluation. Based on these conditions, the proposed MBGPF structure may be subject to liquefaction-induced settlement hazards. To address such hazards, the project would incorporate recommendations from the Geotechnical Evaluation, which include the removal of

existing fill at the MBGPF site down to the alluvial materials and replacement with compacted fill. For settlement-sensitive structures, the compacted fill would be reinforced with geosynthetic material to help avoid the adverse effects of liquefaction, as necessary. Compliance with applicable seismic-safety development requirements would minimize potential effects related to liquefaction and ground related failure at the MBGPF site. While the Well 12 site is likely underlain by similar subsurface conditions, the well is not a type of structure anticipated to require special design considerations (Ninyo & Moore 2022). As such, impacts would be less than significant.

iv) Landslides? **Less Than Significant Impact.**

Landslides occur when combinations of steep slopes, presence of water, seismic activity, or other geologic conditions lead to slope instability. The Relative Landslide Susceptibility and Landslide Distribution Map of the Oceanside Quadrangle prepared by the California Division of Mines and Geology indicates that the site is situated within Relative Landslide Susceptibility Area 2. Area 2 is considered to be "marginally susceptible" to slope failures. Area 2 includes gentle to moderately sloping terrain, where slope failure and landslide occurrences are rare. Based the relatively flat topography on and surrounding the project sites, the Geotechnical Evaluation considered the potential for slope instability or landslides to be very low. Final grading plans for the project would be reviewed and approved by the City to confirm compliance with CBC and City regulations. As such, potential impacts related to landslides would be less than significant.

b. Result in substantial soil erosion or the loss of topsoil? **Less Than Significant Impact.**

The project's potential to result in substantial soil erosion or loss of topsoil would primarily be limited to the temporary construction period when soil is exposed and/or disturbed during grading and other ground-disturbing activities. Because work at the MBGPF site and Well 12 site is not expected to disturb one or more acres of soil, project construction does not present the potential for substantial erosion and would not require compliance with the Construction General Permit or Stormwater Pollution Prevention Plan (SWPPP); however, BMPs would be implemented, as necessary, to control erosion when construction is occurring. Construction-related impacts would therefore be less than significant.

Upon completion of construction activities, the MBGPF site would be similar to existing conditions (developed/paved) and would not result in new or additional potential for erosion or loss of topsoil. The Well 12 site would also be predominately paved. Both sites would require implementation of a stormwater quality management plan (SWQMP) that would include the use of on-site stormwater management features, such as biofiltration basins, to accommodate runoff at the site, which would minimize the potential for on-site or off-site erosion. Impacts would be less than significant.

c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse? **Less Than Significant Impact.**

As detailed above in Item 14.7(a), through inclusion of recommendations provided in the Geotechnical Evaluation and compliance with applicable regulations (e.g., CBC), the project would not result in significant impacts related to liquefaction or landslides. Lateral spreading of ground surface during an earthquake usually takes place along weak shear zones that have formed within a liquefiable soil layer. Lateral spread has generally been observed to take place in the direction of a free-face (i.e., retaining wall, slope, channel) but has also been observed to a lesser extent on ground surfaces with very gentle slopes. For a site located in proximity to a free-face, the amount of lateral ground displacement is strongly correlated with the distance of the site from the free-face. Other factors such as earthquake magnitude, distance from the earthquake epicenter, thickness of the liquefiable layers, and the fines content and particle sizes of the liquefiable layers also affect the amount of lateral ground displacement.

The project site is relatively flat and the nearest channel free-face is located approximately 1,200 feet west of the site. Accordingly, the MBGPF facility is not considered to be at risk from lateral displacement. Based on the proximity of the Well 12 site to the MBGPF site, as well as the similar subsurface conditions, the well improvements are also not considered to be at risk from lateral spreading. As such, impacts would be less than significant.

d. Be located on expansive soil, as defined in Table 18- 1-B of the 1994 Uniform Building Code, creating substantial direct or indirect risks to life or property? **Less Than Significant Impact**.

Laboratory testing conducted as part of the Geotechnical Evaluation indicated that the upper soils at the project site possess a very low expansion potential. Impacts would therefore be less than significant.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water? **No Impact.**

The proposed project does not include the installation of septic tanks or alternative wastewater disposal systems. No impact would occur.

f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? **Potentially Significant Unless Mitigated.**

No known unique geologic features are located at the project site. The project site is underlain by fill from the ground surface to depths of up to approximately nine feet. The fill is underlain by young alluvium. Fills consist of disturbed soils that would not contain paleontological resources. The young alluvial soils, due to their age, would also likely not contain paleontological resources. As such, paleontological resources are not likely to be discovered during implementation of the project.

In the unlikely event of unanticipated discovery of paleontological resources, ground-disturbing activities would cease within 100 feet of the find until a qualified archaeologist or paleontologist is able to evaluate the significance of the finding and appropriate course of action, consistent with the guidelines as identified in mitigation measures GEO-1 and GEO-2 below. With implementation of mitigation measures GEO-1 and GEO-2, potential impacts would be less than significant.

Mitigation Measures

GEO-1 Prior to the start of ground disturbing activities, a Qualified Paleontologist shall conduct pre-construction worker paleontological resources sensitivity training. The Qualified Paleontologist shall contribute to construction worker paleontological resources sensitivity training either in person or via a training module. The training shall include information on what types of paleontological resources could be encountered during excavations, what to do in case an unanticipated discovery is made, and laws protecting paleontological resources. All construction personnel shall be informed of the possibility of encountering fossils and instructed to immediately inform the construction foreman or supervisor if any bones or other potential fossils are unexpectedly unearthed in an area where a paleontological monitor is not present. The developer shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

GEO-2 If paleontological resources (i.e., fossils) are discovered during ground-disturbing activities, the City shall immediately be notified by the Construction Contractor. The Construction Contractor shall ensure that contractors stop work in that area and within 100 feet of the find until a Qualified Paleontologist can assess the significance of the find and develop appropriate treatment measures. Treatment measures shall be made in consultation with the City.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.8 Greenhouse Gas Emissions Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? **Less Than Significant Impact.**

GHGs are emitted by natural processes and human activities primarily associated with: (1) burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition. Emissions of GHGs in excess of natural ambient concentrations are thought to be responsible for the enhancement of the greenhouse effect and contributing to what is termed "global warming," the trend of warming of the Earth's climate from anthropogenic activities. Global climate change impacts are by nature cumulative; direct impacts cannot be evaluated because the impacts themselves are global rather than localized.

The GHGs defined under California's Assembly Bill (AB) 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). As individual GHGs have varying heat-trapping properties and atmospheric lifetimes, GHG emissions are converted to carbon dioxide equivalent (CO_2e) units for comparison. The CO_2e metric is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent measure.

On May 8, 2019, the City adopted the CAP (City 2019) as a part of their General Plan Update, which also includes development of a policy framework in the General Plan Energy and Climate Action Element. The CAP is intended to support statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, enhancing access to sustainable transportation modes, and encouraging other sustainable practices. The CAP builds on a variety of City projects that promote energy efficiency, increased renewable energy use, water conservation, and solid waste reduction (City 2019).

For the purpose of analysis, 900 metric tons (MT) of CO_2e is utilized as the screening level threshold for the project. The screening level threshold is intended to evaluate a project's long-term annual contribution to GHG emission inventories. To determine the project's contribution to future annual City GHG emissions inventories, the construction emissions are amortized (e.g., averaged) over the anticipated lifespan of the project. For projects that exceed the City's screening level threshold, the City has set an efficiency metric significance threshold that aligns with the City's emissions reduction targets as outlined in the CAP of 3.5 MT CO_2e per service population by 2025. Emissions below the screening level or efficiency metric would not be considered significant.

Construction Emissions

Construction sources of GHG emissions include heavy construction equipment, worker vehicle miles traveled, and water use. The project's construction GHG emissions were estimated using CalEEMod Version 2022.1 and are shown in Table 3, *Construction GHG Emissions*. Emissions of GHGs related to the construction of the project would be temporary, and the total estimated GHG emissions associated with construction of the project would be 362 MT CO_2e.

Table 3: Construction GHG Emissions

Year	Emissions (MT CO_2e)
2024	122.7
2025	229.5
2026	9.9
Total	362.1

Source: CalEEMod (output data is provided in Appendix A).
MT = metric ton; CO_2e = carbon dioxide equivalent

Operational Emissions

Water systems consume energy for water extraction, conveyance, treatment, distribution, and end uses. Due to southern California's reliance on imported water, water is typically transported long distances and thus requires extremely high-energy use. With the proposed project, the City aims to increase the utilization of the existing 6.4 MGD capacity of the MBGPF to bolster its supply of locally sourced water by (1) reducing the volume of brine produced and thus increasing the amount of product water recovered at the MBGPF; and (2) increasing the amount of groundwater supplied to the MBGPF through installation of a new groundwater production well. The overall project is estimated to increase MBGPF production by 881 AFY, including 431 AFY from the brine minimization and 450 AFY from the well expansion. By increasing the supply of locally sourced water, the project would decrease the City's reliance on imported water thereby resulting in an offset of energy consumed and reduced GHG emissions.

The project would not result in a substantial increase in GHG emissions. This impact would be less than significant.

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? **Less Than Significant Impact.**

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32 and Senate Bill (SB) 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. The CAP adopted by the City of Oceanside in 2019 provides additional guidelines and outlines a path for achieving these statewide targets.

To ensure the City remains on track to achieve the long-term emission reduction goals of the State, the City has chosen to implement GHG emissions reduction measures proactively to reduce near-term GHG emissions and establish infrastructure to support continued reductions beyond 2030. Each measure describes the overarching goal, such as increasing energy efficiency in residential building units or offsetting energy consumption. Reduction measures are further divided into one or more discrete strategies that the City may implement. Water systems need energy for water extraction, conveyance, treatment, distribution, and end uses. Drinking water may be pumped to the treatment plant, treated, and then pumped again to consumers. Treatment of wastewater and stormwater also requires energy use. In areas where fresh water is scarce,

drinking water may be transported long distances and over high elevations, requiring extremely high-energy use. Water distribution and wastewater treatment account for approximately four percent of Oceanside's community GHG emissions (City 2019). Included among the measures aimed to reduce emissions from this sector, CAP Measure W3, Local Water Supply Development, calls for infrastructure improvements to increase the local supply of potable and recycled water. The purpose of the proposed project is to increase the utilization of the existing MBGPF to bolster its supply of locally sourced water by a total of 881 AFY, thereby contributing to implementation of CAP Measure W3. As such, the project would not conflict with the City's CAP and impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.9 Hazards and Hazardous Materials Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☒	☐
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	☐	☒	☐

a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials? **Less Than Significant Impact.**

Materials and waste are generally considered hazardous if they are poisonous (toxicity); can be ignited by open flame (ignitability); corrode other materials (corrosivity); or react violently, explode, or generate vapors when mixed with water (reactivity). The term "hazardous material" is defined in the State Health and Safety Code (Chapter 6.95, Section 25501[o]) as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. Hazardous waste is defined as any hazardous material that is abandoned, discarded, or recycled, as defined in the State Health and Safety Code (Chapter 6.95, Section 25125). The transportation, use, and

disposal of hazardous materials, as well as the potential releases of hazardous materials to the environment, are closely regulated through many state and federal laws.

Construction of the proposed project would likely require the transport, use, and disposal of materials that are typically associated with construction activities, such as fuels, hydraulic liquids, oils, solvents, and paints. The transport, use, and disposal of such materials would be conducted in accordance with applicable federal and state laws. In addition, implementation of standard BMPs at the sites during construction would limit potential discharges of such materials. Based on the limited use of hazardous materials and implementation of appropriate BMPs, hazardous material impacts related to construction activities would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Operation of the proposed project would include the storage and use of hazardous materials for the TSRO process system and the associated cleaning system. Chemicals expected to be used include citric acid, hydrochloric acid, sodium hydroxide, sodium hydrosulfite, sodium tripolyphosphate, tetrasodium ethylenediaminetetraacetic acid, sodium dodecylbenzene sulfonate, ammonium bifluoride, and proprietary cleaners. These chemicals are currently used at the MBGPF in association with operation of the primary RO train. The proposed project would therefore not introduce new potentially hazardous materials to the site. The chemicals used on site would continue to be stored in compliance with applicable regulations and would not create a significant hazard to the public or the environment. Similarly, other hazardous materials that may be on site during project operations, including those associated with regular building maintenance, such as cleaning products, paints, and landscaping chemicals, are consistent with existing conditions and would not create a significant hazard to the public or the environment. Impacts would be less than significant.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? **Less Than Significant Impact.**

As discussed above in response to item 14.9(a), the project would involve the use of potentially hazardous materials during construction (e.g., fuels, hydraulic liquids, oils, solvents, and paints) and operations (e.g., chemical associated with the TSRO process). Materials used during construction would be typical of construction projects and materials used during operations would be consistent with what is currently used at the MBGPF facility. Materials would be stored in compliance with applicable regulations and would not create a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment. As such, impacts would be less than significant.

c. 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.**

There are no schools within 0.25 mile of the MBGPF site. The proposed Well 12 site is located approximately 0.25 mile west of the closest portion of Pablo Tac School of the Arts, which is a parking lot. The school facilities themselves are located at distances greater than 0.25 mile from the Well 12 site. In addition, potentially hazardous materials used at the Well 12 site would be limited to standard construction materials (e.g., fuels, hydraulic liquids, oils, solvents, and paints) that would be present only temporarily, would not be acutely hazardous, and would not represent a risk to the school. Impacts would be less than significant.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment? **No Impact.**

The SWRCB GeoTracker database (SWRCB 2023) and the California Department of Toxic Substances Control EnviroStor database (California Department of Toxic Substances Control 2023) were reviewed for potential hazardous materials sites listings at the project sites. Neither the MBGPF site nor the Well 12 site includes a listed hazardous materials site on either of these databases. No impact would occur.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in safety hazard or excessive noise for people residing or working in the project area? **Less Than Significant Impact.**

The nearest airport, the Oceanside Municipal Airport, is located approximately 0.6 mile southwest of the MBGPF site and approximately 0.4 mile from the Well 12 site. Both sites are located within the Airport Influence Area of Oceanside Municipal Airport (San Diego County Airport Land Use Commission 2010); however, improvements at the MBGPF site would involve replacing an existing structure with a similar structure and would therefore not result in a new safety hazard or excessive noise for people residing or working in the project area. Improvements at the Well 12 site would not introduce regular occupants or workers that would be subject to a safety hazard or excessive noise. As such, impacts would be less than significant.

f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? **Less Than Significant Impact.**

Construction within Mission Avenue for pipeline installation associated with Well 12 would likely require lane closures that could temporarily affect emergency response and/or evacuation; however, a traffic control plan (TCP) would be implemented that would include measures to ensure continued access along Mission Avenue in both directions. The City would coordinate with emergency responders, as necessary, to notify them of potential lane closures during construction. Following construction, affected roadways would be restored to pre-existing conditions and the project would not include features that would permanently affect emergency response or evacuation. Impacts would be less than significant.

g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? **Less Than Significant Impact.**

Both the MBGPF site and Well 12 site are located within a very high fire hazard severity zone (VHFHSZ) within a Local Responsibility Area (CAL FIRE 2009); however, work for the proposed improvements to the MBGPF would occur within the existing site, which is developed and does not contain dense vegetation that would represent a potential risk for wildland fires. Similarly, the Well 12 site, while undeveloped, does not contain dense vegetation. Therefore, the project would not exacerbate wildfire risk. In addition, the project would not result in additional permanent occupants to either site. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.10 Hydrology and Water Quality Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c. Substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) Result in substantial erosion or siltation on- or off-site; ii) Substantially increase the rate or 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 storm water drainage systems or provide substantial additional sources of polluted runoff; or iv) Impede or redirect flood flows?	☐	☐	☒	☐
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? **Less Than Significant Impact.**

The project's potential to generate pollutants that may degrade surface or groundwater quality would primarily be limited to the temporary construction period. Potential construction-related concerns would include erosion/sedimentation from soil exposure and the release of hazardous substances such as vehicle fuels and lubricants. Because work at the MBGPF site and the Well 12 site is not expected to disturb one or more acres of soil, project construction does not present the potential to substantially degrade water quality and would not require compliance with the Construction General Permit or SWPPP; however, BMPs would be implemented, as necessary, to control discharges during construction. Based on these considerations, impacts related to violating water quality standards or degrading water quality during construction would be less than significant.

During operations, neither site would include regular activities beyond existing conditions that would have the potential to violate water quality standards or waste discharge requirements. Regardless, both sites would require implementation of a SWQMP that would include the use of on-site stormwater management features, such as biofiltration basins, to accommodate runoff at the site. Use of existing and proposed stormwater management features would minimize the potential for violating water quality standards and waste discharge requirements. Operational impacts would be less than significant.

b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? **Less Than Significant Impact.**

The project would occur in the MGB, which is one of five major alluvial groundwater basins that compose the San Luis Rey Valley Groundwater Basin within the San Diego Hydrologic Basin. The MGB has been determined to be a low-priority basin per the California Department of Water Resources Sustainable Groundwater Management Act and is not subject to a groundwater management plan.

With the proposed project, the City aims to increase the utilization of the MBGPF, which would involve increasing the amount of groundwater extracted from the MGB through installation of an additional production well to supply the MBGPF. Currently, the 6.4 MGD capacity MBGPF is underutilized, with the average production since 2002 being 3.5 MGD and peak production not exceeding 5.7 MGD. When the capacity of the MBGPF was increased from 2.0 MGD to 6.4 MGD in 2002, the City conducted studies to determine the impact of groundwater pumping on local groundwater levels. Those studies concluded that the expansion of the MBGPF would result in no significant impact to existing groundwater-dependent vegetation during extended dry-year periods lasting up to three years. In addition, with the City's Pure Water Oceanside program, which is currently operating, advanced treated water produced at the Advanced Water Treatment facility is recharged into the MGB regardless of hydrologic conditions (City 2021). Therefore, groundwater extraction to occur upon implementation of the proposed project would be within planned parameters and would not substantially decrease groundwater supplies. The project would also not interfere substantially with groundwater recharge because the project would not add a significant amount of impervious surfaces over existing conditions, with the improvements at the MBGPF occurring at an already developed and paved site and the Well 12 site being relatively small. As such, impacts would be less than significant.

c. Substantially alter the existing drainage pattern of the site or area including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

    i) Result in substantial erosion or siltation on- or off-site? **Less Than Significant Impact**.

The Project would not result in the alteration of the course of a stream or river. Potential erosion/siltation impacts would generally be limited to the project's construction period and would be avoided or reduced below a level of significance through implementation of BMPs. Upon completion of construction activities, the MBGPF site would be similar to existing conditions (developed/paved) and would not result in new or additional potential for erosion or loss of topsoil. The Well 12 site would also be predominately paved. Both sites would require implementation of a SWQMP that would include the use of on-site stormwater management features, such as biofiltration basins, to accommodate runoff at the site. Use of existing and proposed stormwater management features would minimize the potential for on-site or off-site erosion and siltation. Impacts would be less than significant.

    ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site? **Less Than Significant Impact.**

The Project would not result in the alteration of the course of a stream or river. As discussed in Item 14.10(a), the project would implement stormwater BMPs to control stormwater runoff during construction. Upon completion of construction activities, the MBGPF site would be similar to existing conditions (developed/paved) and would not substantially increase the rate or amount of surface runoff at the site in a manner that would result in flooding on or off site. Regardless, a SWQMP would be implemented to accommodate runoff. Although development of the Well 12 site would involve more impervious surfaces than the existing condition, the associated increase in stormwater runoff would be negligible based on the size of the site (less than 0.1 acre) and would not result in flooding on or off site. In addition, a SWQMP would

be implemented for the Well 12 site and would include a biofiltration basin that would accommodate runoff generated at the site. As such, impacts would be less than significant.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? **Less Than Significant Impact.**

The Project would not result in the alteration of the course of a stream or river. As discussed in Item 14.10(a), the project would implement stormwater BMPs to control stormwater runoff during construction. Upon completion of construction activities, the MBGPF site would be similar to existing conditions (developed/paved) and would not create or contribute new or additional runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Regardless, a SWQMP would be implemented to accommodate runoff. Although development of the Well 12 site would involve more impervious surfaces than the existing condition, the associated increase in stormwater runoff would be negligible based on the size of the site (less than 0.1 acre) and would not create or contribute new or additional runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. In addition, a SWQMP would be implemented at the Well 12 site that would include a biofiltration basin that would accommodate runoff generated at the site. As such, impacts would be less than significant.

iv) Impede or redirect flood flows? **Less Than Significant Impact.**

Both the MBGPF site and Well 12 site are located within Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Zone A99, which is a Special Flood Hazard Area (SFHA; FEMA 2012). Zone A99 is defined as areas with a one percent annual chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

The improvements at the MBGPF site would involve the construction of a new vertical structure in a location where structures of similar size are currently present. The new structure would therefore not represent a substantial increase in the potential to impede or redirect flood flows over existing conditions. Similarly, based on the relatively small size of the primary vertical structure proposed at the Well 12 site (25-foot by 65-foot for the CMU enclosure), improvements at the Well 12 site are not expected to represent a substantial increase in the potential to impede or redirect flood flows over existing conditions. In addition, it is expected that the proposed elevations for the project would result in both the MBGPF site and Well 12 site being outside of areas of substantial flood risk. Therefore, the project would not substantially alter the existing drainage pattern of the site or area in a manner that would impede or redirect flood flows. Impacts would be less than significant.

d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? **Less Than Significant Impact.**

Neither the MBGPF site nor the Well 12 site would represent a substantial risk for the release of pollutants due to project inundation over existing conditions. The MBGPF site would include facilities similar to those currently present. The Well 12 site would not include regular activities or facilities that would generate pollutants. In addition, as noted in Item 14.10(c), it is expected that the proposed elevations for the project would result in both the MBGPF site and Well 12 site being outside of areas of substantial flood risk. Both sites are over three miles from the ocean and are not subject to risk from inundation by tsunami. Similarly, there are no large, enclosed bodies of water near the project capable of resulting in inundation by seiche. Impacts would be less than significant.

e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? **Less Than Significant Impact.**

The Water Quality Control Plan for the San Diego Basin (Basin Plan) designates beneficial uses for water bodies in the San Diego Region, including the project area, and establishes water quality objectives and implementation plans to protect those beneficial uses. The proposed project would not result in impairments to nearby water bodies, including the San Luis Rey River, and would therefore not affect the associated beneficial uses. As discussed in Item 14.10(a), the project's potential to generate pollutants that may degrade surface or groundwater quality would primarily be limited to the temporary construction period. Potential construction-related concerns would include erosion/sedimentation from soil exposure and the release of hazardous substances such as vehicle fuels and lubricants. BMPs would be implemented, as necessary, to control discharges when construction is occurring. During operations, neither the MBGPF site nor the Well 12 site would include regular activities beyond existing conditions that would have the potential to generate pollutant discharges that could impair nearby water bodies. Regardless, both sites would require implementation of a SWQMP that would include the use of on-site stormwater management features, such as biofiltration basins, to accommodate runoff at the site. Based on these considerations, the project would not conflict with or obstruct implementation of the Basin Plan.

The project would occur in the MGB, which is one of five major alluvial groundwater basins that compose the San Luis Rey Valley Groundwater Basin within the San Diego Hydrologic Basin. The MGB has been determined to be a low-priority basin per the California Department of Water Resources Sustainable Groundwater Management Act and is not subject to a groundwater management plan. As such, the project would not conflict with or obstruct a sustainable groundwater management plan and impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.11 Land Use and Planning Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

a. Physically divide an established community? **No Impact.**

The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area. Improvements to the MBGPF would occur within the existing MBGPF and installation of Well 12 would occur within an undeveloped City-owned parcel that is bound by SR 76, Mission Avenue, and the City's Fire Station No. 7. Neither site provides access or connectivity to other uses. As such, the project would not physically divide an established community; no impact would occur.

b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? **No Impact.**

The MBGPF component of the project involves improvements to an existing facility that is within City-owned property. The project would expand the existing facility but would not introduce a new land use. In addition, the site has General Plan land use designation of Civic Institution and a zoning designation of Public and Semipublic, neither of which preclude utility infrastructure. The new Well 12 would also be within City-owned property and would be consistent with existing well uses on the adjacent parcel. The well is a permitted use within the Commercial General Plan land use and zoning designation for the site. As discussed above in Item 14.4(f), the project would not conflict with the provisions of the San Diego regional MHCP. Therefore, the project would not conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. No impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.12 Mineral Resources Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? **No Impact.**

Mineral resources are commonly defined as a concentration or occurrence of natural, solid, inorganic, or fossilized organic material in or on the earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. Mineral resources can be categorized into three classes: fuel, metallic, and non-metallic. Fuel resources comprise coal, oil, and natural gas. Metals include such resources as gold, silver, iron, and copper. Lastly, non-metal resources include industrial minerals and construction aggregate. Industrial minerals include boron compounds, rare-earth elements, clays, limestone, gypsum, salt, and dimension stone. Construction aggregate includes sand, gravel, and crushed stone.

The Surface Mining and Reclamation Act of 1975 (SMARA) is the primary regulator for surface mining in the State. The act requires the State Geologist (California Geological Survey) to identify all mineral deposits in the State and to classify them based on their significance. SMARA defines a mineral deposit as a naturally occurring concentration of minerals in amounts or arrangement that under certain conditions may constitute a mineral resource. The concentration may be of value for its chemical or physical characteristics. The classification of these mineral resources is a joint effort of the State and local governments. It is based on geologic factors and requires that the State Geologist classify the mineral resources area as one of four Mineral Resource Zones (MRZs), Scientific Resource Zones (SZs), or Identified Resource Areas (IRAs), described below:

- MRZ-1: An MRZ where adequate information indicates that no significant mineral deposits are present or likely to be present.

- MRZ-2: An MRZ where adequate information indicates that significant mineral deposits are present or a likelihood of their presence, and development should be controlled.
- MRZ-3: An MRZ where mineral resource significance is undetermined.
- MRZ-4: An MRZ where there is insufficient data to assign any other MRZ designation.
- SZ Areas: Containing unique or rare occurrences of rocks, minerals, or fossils that are of outstanding scientific significance shall be classified in this zone.
- IRA Areas: County or State Division of Mines and Geology Identified Areas where adequate production and information indicate that significant minerals are present.

According to the Generalized Mineral Land Classification Map of Western San Diego County prepared by the California DOC Division of Mines and Geology, the project area is classified as MRZ-3 (DOC 1982). Therefore, the significance of mineral resources in the project region is undetermined. The City's General Plan EIR states that the potential for viable extraction of mineral resources within the MRZ-3 is limited due to the city's urbanized character. In addition, the City's General Plan does not identify the project sites as locally important mineral resource recovery sites. Regardless, there are no known mineral resources at the sites; therefore, there would be no loss of availability of a known mineral resource that would be of value to the region and the residents of the State. Additionally, the City's General Plan and Zoning Ordinance would not permit mineral extraction on or within the vicinity of the project sites. Therefore, the project would have no impact related to the loss of availability of mineral resources.

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan? **No Impact.**

Refer to Item 14.12(a), above.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.13 Noise Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b. Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☒	☐

Fundamentals of Sound and Environmental Noise

Noise can be defined as unwanted sound. Sound (and therefore noise) consists of energy waves that people receive and interpret. Noise consists of any sound that may produce physiological or psychological damage

and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch can present an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations (cycles per second) of a wave that results in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment. It is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves combined with the reception characteristics of the ear.

Sound intensity or acoustic energy is measured in decibels (dB) that are weighted to correct for the relative frequency response of the human ear. Unlike linear units (inches or pounds), decibels are measured on a logarithmic scale, representing points on a sharply rising curve.

Since dBs are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. As a rule, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dBA.[1] Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dBA. A three-dBA change in sound is the level where humans generally notice a barely perceptible change in sound and a five-dBA change is generally readily perceptible.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels. The predominant rating scales for human communities are the Noise Equivalent (L_{EQ}), and the Community Noise Equivalent Level (CNEL), both of which are based on dBA. The L_{EQ} is the total sound energy of time-varying noise over a sample period. The CNEL is the average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of ten decibels to sound levels in the night from 10:00 p.m. to 7:00 a.m. CNEL is utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night.

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? **Potentially Significant Unless Mitigated.**

Construction Noise

The City's General Plan Noise Element states that it shall be unlawful for any person to operate construction equipment at a level in excess of 85 dBA at 100 feet from the source. Additionally, the General Plan states that construction equipment shall not be operated within any residential zone or 500 feet from any residential zone between 8:00 p.m. and 7:00 a.m., generating an ambient noise level of 50 dBA at any property line.

Noise impacts from project construction activities would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of construction activities, the relative distance between noise source and receptor, and intervening structures and/or topography. Construction equipment would not all operate at the same time or location. Furthermore, construction equipment would not be in constant use throughout the work day.

[1] To account for the range of sound that human hearing perceives, a modified scale is utilized known as the A-weighted decibel, dBA. Sound intensity or acoustic energy is measured in dBs that are weighted to correct for the relative frequency response of the human ear. For example, an A-weighted noise level includes a de-emphasis on high frequencies of sound that are heard by a dog's ear but not by a human's ear.

Construction activities for the project would include site preparation, demolition, grading, trenching, structure construction, and paving. Each construction activity would involve the use of various types of construction equipment and would have its own distinct noise characteristics. The loudest combinations of pieces of equipment anticipated to be used simultaneously for each of the proposed construction activities and the resultant noise levels at 100 feet are shown in Table 4, *Construction Noise Levels*.

Table 4: Construction Noise Levels

Activity	Simultaneous Equipment	Noise Level at 100 feet (dBA L_{EQ})
MBGPF		
Site Preparation	1 Grader, 1 Tractor/Loader/Backhoe	75.7
Demolition	1 Concrete/Industrial Saw	76.6
	1 Rubber Tired Dozer, 1 Tractor/Loader/Backhoe	73.1
Grading	1 Grader, 1 Tractor/Loader/Backhoe	75.7
	1 Rubber Tired Dozer, 1 Tractor/Loader/Backhoe	73.1
Trenching	1 Tractor/Loader/Backhoe	67.6
Building Construction	1 Crane, 1 Forklift, 1 Tractor/Loader/Backhoe	70.7
Paving	1 Roller, 1 Tractor/Loader/Backhoe	70.3
	1 Paver, 1 Tractor/Loader/Backhoe	70.9
Well 12		
Site Preparation	1 Grader, 1 Tractor/Loader/Backhoe	75.7
Demolition	1 Concrete/Industrial Saw	76.6
	1 Rubber Tired Dozer, 1 Tractor/Loader/Backhoe	73.1
Grading	1 Grader, 1 Tractor/Loader/Backhoe	75.7
	1 Rubber Tired Dozer, 1 Tractor/Loader/Backhoe	73.1
Trenching	1 Tractor/Loader/Backhoe	67.6
Well Construction	1 Drill Rig, 1 Forklift, 1 Tractor/ Loader/Backhoe	73.2
Paving	1 Roller, 1 Tractor/Loader/Backhoe	70.3
	1 Paver, 1 Tractor/Loader/Backhoe	70.9

As shown in Table 4, noise levels from the simultaneous operation of equipment for each stage of project construction would be below the City's limit of 85 dBA at 100 feet.

Pursuant to the City's Noise Control Ordinance (Chapter 38 of the City Municipal Code) and the City's General Plan Noise Element, construction activities are required to be limited to daytime hours (7:00 a.m. to 6:00 p.m. Monday through Friday, or from 8:30 a.m. to 4:30 p.m. on Saturday) for the duration of construction. While most project construction activities would occur within the allowable hours, it is anticipated that there would be 15 to 20 days when drilling for installation of Well 12 would require 24-hour operations. These nighttime operations would have the potential to affect the residential uses located approximately 350 feet east of the Well 12 drilling location. It is expected that the drill rig would be operating by itself during this time. At 350 feet, a drill rig is estimated to create a noise level of 60.5 dBA L_{EQ}. This would exceed the 50-dBA limit specified in the City's General Plan Noise Element for construction occurring within 500 feet of a residential zone between 8:00 p.m. and 7:00 a.m.; therefore, impacts are considered potentially significant. Mitigation measure NOI-1 would be implemented to reduce potential impacts to a less-than-significant level.

Construction activities would generate traffic in the forms of haul trucks, vendor vehicles, and worker commute vehicles. A project's construction traffic noise generation is primarily a factor of the number of haul trucks required per day, with high numbers of haul trucks typically associated with projects with extensive grading and the associated import and/or export of earth material. Grading for the proposed project would be balanced on site and would therefore not require haul trucks to import and/or export earth material. While haul trucks would be required to export demolition materials, the number of daily trucks required is expected to be minimal and without the potential to increase average noise levels along roadways in the vicinity of the project. Impacts associated with construction traffic noise would be less than significant.

Operational Noise

The City's Noise Control Ordinance (Chapter 38 of the City Municipal Code) governs operational noise and sets forth the maximum one-hour average sound levels, as measured at the property line, for various base district zones for operational noise. When property lines form the joint boundary of two base district zones, the sound level limit is the arithmetic mean of the limit applicable to each of the two zones. The MBGPF site is zoned Public and Semipublic and shares property lines with land zoned Open Space to the north, Public and Semipublic to the east, and Commercial to the south and west. Since the Public and Semipublic zone does not have a specified sound level limit in the City's Noise Control Ordinance, the commercial limit is used for this analysis, as it is the most similar zone type to the project. Based on these zones, operational noise from the MBGPF site is subject to the following property line noise limits: 57.5 dBA from 7:00 a.m. to 9:59 p.m. and 52.5 dBA from 10:00 p.m. to 6:59 a.m. at the northern and property line; and 65 dBA from 7:00 a.m. to 9:59 p.m. and 60 dBA from 10:00 p.m. to 6:59 a.m. at the eastern, southern, and western property lines. The Well 12 site is zoned Commercial and shares property lines with land also zoned Commercial to the east, south, and west (SR 76 is to the north). Operational noise from the Well 12 site is subject to property line noise limits of 65 dBA from 7:00 a.m. to 9:59 p.m. and 60 dBA from 10:00 p.m. to 6:59 a.m. at the eastern, southern, and western property lines.

Improvements at the MBGPF site would include the provision of new TSRO equipment (in addition to existing primary RO equipment), which would generate noise; however, the equipment would be located within a steel building that would preclude operational noise from exceeding the specified limits. Other potential noise sources, including building exhaust fans, would be similar to the existing facility. Therefore, the project would not result in a considerable change in noise levels from existing conditions at the MBGPF site.

The Well 12 site would include a submersible pump that would have components below grade and would not generate noise. Use of the emergency generator would be limited to occasional short-term testing that would not represent a substantial new source of noise. In addition, the Well 12 site would be surrounded by an eight-foot-tall CMU wall that would attenuate noise levels at off-site uses, the closest of which are located across Mission Avenue over 150 feet from the Well 12 site. As such, operational noise impacts associated with Well 12 would be less than significant.

Mitigation Measures

NOI-1 **Nighttime Construction Management Plan.** The project specifications shall require preparation of a Nighttime Construction Management Plan prior to the onset of construction. The plan shall describe measures to reduce noise levels to 50 dBA L_{EQ} at residential properties for any nighttime work that may occur. Specific measures to reduce construction noise may include:

- Placement of noise-generating equipment as far as feasible from noise-sensitive land uses.

- Utilization of enclosures or other barriers for equipment to reduce noise levels.
- Construction equipment properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment operated with closed engine doors and equipped with factory-recommended mufflers.
- Written notification to residents within 500 feet of the project's property line, provided a minimum of one week prior to nighttime construction activity. Notification to include a description of activities anticipated, expected dates and hours for construction, and contact information with details of a complaint and response procedure.

b. Generation of excessive groundborne vibration or groundborne noise levels? **Less Than Significant Impact.**

Construction activities required for the project are not anticipated to generate excessive groundborne vibrations or noise levels. No pile driving would be necessary for project construction. The source with the greatest potential for vibration generation during construction would be a vibratory roller used to achieve soil compaction prior to paving. A standard vibratory roller creates approximately 0.210 inch per second peak particle velocity (PPV) at a distance of 25 feet (Caltrans 2020). Based on this metric, use of a vibratory roller within 50 feet would have the potential to exceed the "strongly perceptible" vibration annoyance potential criteria for human receptors of 0.1 inch per second PPV, as specified by Caltrans in its Transportation and Construction Vibration Guidance Manual (2020). There are no residences or other vibration-sensitive uses (facilities where vibration would interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations) within 50 feet of the project's construction sites. Therefore, project-related vibration impacts would be less than significant.

The Project's operations would not include components that would have the potential to generate perceptible vibration at adjacent properties; therefore, no operational vibration impacts would occur.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? **Less Than Significant Impact.**

The nearest airport, the Oceanside Municipal Airport, is located approximately 0.6 mile southwest of the MBGPF site and approximately 0.4 mile from the Well 12 site. Airport noise is regulated by the Oceanside Municipal Airport Land Use Compatibility Plan (ALUCP). According to the ALUCP, live-work and hotel uses are compatible with noise levels up to 60 CNEL, and commercial and retail uses are compatible with noise levels up to 65 CNEL (San Diego County Airport Land Use Commission 2010). Both the MBGPF site and Well 12 site are located outside the 60 CNEL contour of Oceanside Municipal Airport. Therefore, the project would not expose people residing or working in the project area to excessive noise levels. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.14 Population and Housing Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b. Displace substantial numbers of existing people housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

a. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? **No Impact.**

Growth inducing impacts are caused by those characteristics of a project that foster or encourage population and/or economic growth, such as new housing or creation of a new job center (direct) or the expansion of infrastructure to increase capacity (indirect). The project would not directly induce growth through the introduction of new homes or businesses. The project would also not indirectly induce unplanned growth as it would allow for the existing MBGPF to achieve its intended capacity of 6.4 MGD to meet the service area demands as planned and outlined in the City's Urban Water Management Plan (UWMP). Construction activities would be staffed by local contractors. During operation, the project would be staffed by current employees and would not require additional employees that would result in population growth. As such, no impacts related to inducing substantial unplanned population growth would occur.

b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? **No Impact.**

The project would not require the removal of existing housing and, therefore, would not necessitate the construction of replacement housing elsewhere. No impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.15 Public Services Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire Protection?	☐	☐	☒	☐
Police Protection?	☐	☐	☒	☐
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Fire Protection? **Less Than Significant Impact.**

The Oceanside Fire Department provides fire and emergency services throughout the City. The closest fire station to the project is Fire Station No. 7, located immediately adjacent to the Well 12 site and approximately 0.5 mile southwest of the MBGPF site. During construction, there could be a short-term increase in demand for fire protection service in the event of an emergency or accident; however, the resulting demand on fire protection services would not be so great as to require new or physically altered fire facilities. During operations, the project would be similar to existing conditions and would not require additional fire protection services. As such, impacts associated with fire protection services would be less than significant.

Police Protection? **Less Than Significant Impact.**

The Oceanside Police Department provides law enforcement services throughout the City. the closest police station to the project is located at 3855 Mission Avenue, approximately 0.8 mile northeast of the Well 12 site and 0.6 mile east of the MBGPF site. During construction, there could be a short-term increase in demand for police protection service in the event of theft or vandalism at the construction sites; however, the resulting demand on police protection services would not be so great as to require new or physically altered police facilities. During operations, the project would be similar to existing conditions and would not require additional police protection services. As such, impacts associated with police protection services would be less than significant.

Schools? **No Impact.**

The Oceanside Unified School District provides education services in the City. The project does not propose new housing and would not induce population growth such that there would be an increase in demand for school services. Therefore, implementation of the proposed project would not result in the need for construction of additional school facilities. No impact would occur.

Parks? **No Impact.**

The project does not propose new housing and would not induce population growth such that there would be an increase in demand for parks. Therefore, implementation of the proposed project would not result in the need for construction of additional parks. No impact would occur.

Other public facilities? **No Impact.**

The project does not propose new housing and would not induce population growth such that there would be an increase in demand for other public facilities. Therefore, implementation of the proposed project would not result in the need for construction of additional public facilities. No impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.16 Recreation Would the project:				
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated? **No Impact.**

As discussed in Item 14.14(a), the project would not induce population growth. As such, implementation of the project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. No impact would occur.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment? **No Impact.**

The project does not include recreational facilities or require the construction or expansion of recreational facilities. No impact would occur.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.17 Transportation Would the project:				
a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☒	☐
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)?	☐	☐	☐	☒
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d. Result in inadequate emergency access?	☐	☐	☒	☐

a. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? **Less Than Significant Impact**

The project would not involve permanent changes to the existing public circulation system. The upgraded MBGPF would be located within the existing site, would be staffed by existing employees, and would therefore not require improvements to the existing circulation system. Operational traffic, which would utilize Fireside Street and Heritage Street, would be similar to existing conditions. Construction traffic along Fireside Street and Heritage Street would be temporary and would not be at a level that would substantially affect the local circulation system. Well 12 would be located on an undeveloped City-owned parcel. While the Well 12 site would require installation of a new ingress/egress driveway along Mission Avenue, use of the driveway would be limited to occasional maintenance trips and would have a negligible effect on the existing circulation network. To address installation of a pipeline within Mission Avenue to occur as part of construction of Well 12, a TCP, approved by the City, would be implemented to maintain acceptable circulation.

The City's General Plan Circulation Element includes policies for safe bicycle and pedestrian travel through the City. Bicycle and pedestrian facilities in proximity to the project include Class II bikes lanes with striping and sidewalks along Mission Avenue adjacent to the Well 12 site. These facilities, specifically those on the north side of the roadway, may be temporarily inaccessible during construction of the Well 12 site; however, the TCP to be implemented during construction would provide detours and/or other measures to maintain safety for bicyclists and pedestrians. Following construction of the Well 12 site, the bicycle lane(s) and sidewalk(s) would be restored to pre-existing conditions.

Public transit in the vicinity of the project includes bus service provided by the North County Transit District. Bus route 303 travels along Mission Avenue with an eastbound stop located on the south side of the roadway directly across from the Well 12 site and a westbound stop located on the north side of the roadway approximately 270 feet west of the Well 12 site. It is anticipated that the project would not affect service to either of these stops.

Overall, the project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Impacts would be less than significant.

b. Conflict or be inconsistent with CEQA Guidelines section 15064.3 subdivision (b)? **No Impact.**

The passage of SB 743 resulted in a shift in determining transportation impacts under CEQA from measurements of LOS and vehicular delay to vehicle miles traveled (VMT). The City's Traffic Impact Analysis Guidelines were created to reconcile local policy and new CEQA Guidelines (City 2020). As outlined in the Traffic Impact Analysis Guidelines, a project that generates fewer than 200 ADT would not be required to prepare an additional local transportation study (City 2020). Additionally, according to the City's Traffic Impact Analysis Guidelines, projects that generate less than 1,000 ADT and are consistent with the General Plan are screened out from preparing a VMT analysis (City 2020). The project would not result in additional permanent trips as it would be staffed and maintained by existing employees. Therefore, neither a local transportation study nor a VMT analysis is required. As such, the project would not create a significant transportation impact under CEQA Guidelines section 15064.3(b). No impact would occur.

c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? **Less Than Significant Impact.**

Construction within Mission Avenue for pipeline installation associated with Well 12 could result in temporary traffic-related hazards; however, a TCP would be implemented that would include measures to ensure continued safety of the roadway during construction. Following construction, affected roadways would be restored to pre-existing conditions. The design for the new ingress/egress driveway at the Well 12 site along Mission Avenue would be reviewed and approved by the City to assure that it meets City standards prior to installation. Work at the MBGPF site would not result in traffic hazards as the improvements would be limited to the existing site where public access is restricted. As such, the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses. Impacts would be less than significant.

d. Result in inadequate emergency access? **Less Than Significant Impact.**

Construction within Mission Avenue for pipeline installation associated with Well 12 would likely require lane closures that could temporarily affect emergency access; however, a TCP would be implemented that would include measures to ensure continued access along Mission Avenue in both directions. The City would coordinate with emergency responders, as necessary, to notify them of potential lane closures during construction. Following construction, affected roadways would be restored to pre-existing conditions and the project would not include features that would permanently affect emergency access. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.18 Tribal Cultural Resources Would the project: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe and that is:				
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☒	☐	☐
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5025.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k). **Potentially Significant Unless Mitigated.**

b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code section 5025.1, the lead agency shall consider the significance of the resource to a California Native American tribe. **Potentially Significant Unless Mitigated.**

HELIX contacted the NAHC on February 16, 2021 for a Sacred Lands File search and list of Native American contacts for the project area. The NAHC indicated in a response dated March 1, 2021 that the Sacred Lands File search was positive and recommended contacting the La Jolla Band of Mission Indians and SLR. HELIX solicited input from SLR to adequately assess cultural sensitivity of the project area and identify potential impacts to tribal cultural resources from the project.

California AB 52, through its implementing regulations, requires that lead agencies consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project and who have requested in writing to be informed by the lead agency of proposed projects in the tribe's geographic area (Public Resources Code Section 21080.3.1[b] and [d]).

In accordance with AB 52, the City sent letters to initiate consultation to 29 tribal contacts on July 13, 2023. Rincon and SLR requested consultation per AB 52. City staff met with Rincon on September 21, 2023 and with SLR on September 29, 2023 to discuss the project and solicit input from the tribes regarding tribal cultural resources in the project area. Rincon indicated the presence of a known resource in the area; the City and Rincon discussed potential project redesign and other alternatives to avoid impacts to cultural resources to the extent feasible. SLR indicated the cultural sensitivity of the project area and requested that

archaeological and Native American monitoring be conducted during the project's ground-disturbing activities. Following the consultation meeting, SLR reviewed the project's proposed mitigation measures and indicated concurrence with the City that the measures adequately address the tribe's concerns. Consultation with SLR per AB 52 was concluded on November 16, 2023.

Based on the high degree of cultural sensitivity of the project area, the presence of known archaeological resources (as discussed in Item 14.5[a]), and the potential for unknown, buried cultural resources, there is potential for the project to affect tribal cultural resources. The project would implement mitigation measures CUL-1 through CUL-10 to reduce potential impacts to tribal cultural resources to a less-than-significant level.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.19 Utilities and Service Systems Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	☐	☒
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects? **Less Than Significant Impact.**

The project involves improvements to the existing MBGPF and installation of a new production well and associated facilities, the environmental effects of which are assessed throughout this IS. Aside from the proposed project features, the project would not require the relocation or construction of additional water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities that could cause significant off-site adverse effects. Impacts would be less than significant.

b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years? **No Impact.**

The purpose of the project is to bolster the City's supply of locally sourced water. Sufficient water supplies would be available to serve construction of the project, which would require negligible amounts of water for such temporary activities as BMP implementation (e.g., dust suppression), vehicle/equipment washing, and

sanitation over the 18-month construction period. Once operational, the project would increase the utilization of the existing 6.4 MGD capacity of the MBGPF and decrease the City's reliance on imported water by increasing the amount of water recovered at the MBGPF and increasing the amount of groundwater supplied to the MBGPF through installation of the new Well 12. Therefore, no impact would occur.

c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? **No Impact.**

The MBGPF, in its existing condition, generates wastewater in the form of brine that is a byproduct of the water treatment process. The project would result in a reduction in the volume of brine discharged compared to the existing condition. In addition, the brine is discharged to the ocean and does not require service by a wastewater treatment provider. As such, the project would not result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. No impact would occur.

d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? **Less Than Significant Impact.**

Solid waste temporarily generated during project construction would include construction debris (e.g., building demolition materials, asphalt, packaging) and excavated soil. In compliance with AB 939 and City requirements, a waste management plan (WMP) would be prepared prior to commencement of construction activities. The WMP would detail how the project would achieve 65 percent waste diversion. Compliance with regulations during construction would ensure the project would not generate solid waste in excess of the applicable standards or local capacity. Operation of the project would not generate solid waste or affect landfill capacities beyond existing conditions. As such, impacts would be less than significant.

e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? **Less Than Significant Impact.**

As discussed above in Item 14.19(d), the project would comply with AB 939 and City requirements through preparation and implementation of a WMP to divert at least 65 percent of construction waste. Operation of the project would not generate solid waste beyond existing conditions. As such, impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.20 Wildfire If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.	☐	☐	☒	☐
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Both the MBGPF site and Well 12 site are located within a VHFHSZ within a Local Responsibility Area (CAL FIRE 2009).

a. Substantially impair an adopted emergency response plan or emergency evacuation plan? **Less Than Significant Impact.**

As discussed in Item 14.17(d), construction within Mission Avenue for pipeline installation associated with Well 12 would likely require lane closures that could temporarily affect emergency response and/or evacuation; however, a TCP would be implemented that would include measures to ensure continued access along Mission Avenue in both directions. The City would coordinate with emergency responders, as necessary, to notify them of potential lane closures during construction. Following construction, affected roadways would be restored to pre-existing conditions and the project would not include features that would permanently affect emergency response or evacuation. Impacts would therefore be less than significant.

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? **Less Than Significant Impact.**

As discussed in Item 14.9(g), work for the proposed improvements to the MBGPF would occur within the existing site, which is developed and does not contain dense vegetation that would represent a potential risk for wildland fires. Similarly, the Well 12 site, while undeveloped, does not contain dense vegetation. Therefore, the project would not exacerbate wildfire risk. In addition, the project would not result in additional permanent occupants to either site. Impacts would be less than significant.

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. **Less Than Significant Impact.**

The project would involve the installation and maintenance of infrastructure, including a new access driveway and pipeline at the Well 12 site. Impacts associated with the proposed project components are assessed throughout this IS. The project would not require the installation or maintenance of additional off-site infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? **Less Than Significant Impact.**

As discussed in Item 14.7(a)(iv), the potential for slope failure and landslides at the project sites is considered to be very low. While both the MBGPF site and Well 12 site are currently mapped within a SFHA, it is expected that the proposed elevations for the project would result in both the MBGPF site and Well 12 site being outside of areas of substantial flood risk, as discussed in Item 14.10(c)(iv). In addition, the presence of people and structures at the MBGPF site would be consistent with existing conditions. The Well 12 site would not involve the regular presence of people and would not involve large above-grade structures that would be at significant risk from flooding. Impacts would be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mit.	Less than Significant Impact	No Impact
14.21 Mandatory Findings of Significance Would the project:				
a. Does the project have the potential substantially to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to decrease below self- sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory?	☐	☒	☐	☐
b. Does the project have impacts which are individually limited, but cumulatively considerable ("Cumulatively considerable" means the project's incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐
c. Does the project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly?	☐	☐	☐	☒

a. Does the project have the potential substantially to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to decrease below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of major periods of California history or prehistory? **Potentially Significant Unless Mitigated.**

As described in Section 14.4, *Biological Resources*, project construction during the breeding seasons for least Bell's vireo and nesting birds and raptors protected under the MBTA and CFG Code could result in direct and/or indirect (i.e., noise) impacts to these species. Mitigation measures BIO-1 through BIO-3 would reduce such impacts to less-than-significant levels. While there are no sensitive vegetation communities within the project sites that would be directly affected by the project, potential indirect impacts related to water quality degradation and inadvertent vegetation removal during construction could occur to a small patch of southern willow scrub that is adjacent to the MBGPF site. Mitigation measures BIO-4 and BIO-5 would reduce potential indirect impacts to less-than-significant levels. The project would not reduce the habitat of a fish or

wildlife species, as no natural habitat would be removed, nor would the project cause a wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

As described in Section 14.5, *Cultural Resources*, the project has the potential to affect a large, significant cultural resource site (CA-SDI-5445) that overlaps the project where a large amount of cultural material has been recovered that is of importance to the Luiseño community. Additional unknown archaeological resources and human remains may also be present based on the cultural sensitivity of the site, impacts to which would be significant. Implementation of mitigation measures CUL-1 through CUL-10 would reduce potential impacts to less-than-significant levels. Through implementation of mitigation, the project would not eliminate important examples of the major periods of California history or prehistory.

b. Does the project have impacts which are individually limited, but cumulatively considerable ("Cumulatively considerable" means the project's incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? **Less Than Significant Impact.**

Cumulative impacts are defined as two or more individual project effects that, when considered together or in concert with other projects, combine to result in a significant impact (CEQA Guidelines Section 15355). One project, the Ocean KAMP project (State Clearinghouse No. 2006111033), is proposed adjacent to the MBGPF site. The project area for the Ocean KAMP project would occur approximately 250 feet west of the MBGPF site at its closest point; however, most the activity associated with the Ocean KAMP project would occur at distances greater than 250 feet based on the large size of the site. While in proximity, the proposed project, with impacts that are primarily limited to short-term and localized construction effects, would not result in impacts that are cumulatively considerable. No significant air pollutant or GHG emissions would occur, no sensitive habitat would be removed, impacts to cultural resources and tribal cultural resources would be avoided through construction monitoring, and noise effects would be limited through implementation of noise abatement measures. Impacts would be less than significant.

c. Does the project have environmental effects which will have substantial adverse effects on human beings, directly or indirectly? **No Impact.**

With the adherence to regulatory codes, ordinances, regulations, standards, and guidelines, in conjunction with the discussed mitigation measures, construction and operation of the proposed project would not present a substantial adverse effect on human beings either directly or indirectly. In addition, all resource topics associated with the project have been analyzed in accordance with CEQA Guidelines and found to pose no impact, less than significant impact, or less than significant impact with mitigation. Further environmental analysis is not required. No impact would occur.

15. PREPARATION

This initial study for the subject project was prepared by HELIX Environmental Planning, Inc.

16. DETERMINATION

(To be completed by lead agency) Based on this initial evaluation:

[ ] I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

[X] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described herein have been included in this project. A MITIGATED NEGATIVE DECLARATION will be prepared.

[ ] I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

17. DE MINIMIS FEE DETERMINATION

(Chapter 1706, Statutes of 1990-AB 3158)

[ ] It is hereby found that this project involves no potential for any adverse effect, either individually or cumulatively, on wildlife resources and that a "Certificate of Fee Exemption" shall be prepared for this project.

[X] It is hereby found that this project could potentially impact wildlife, individually or cumulatively, and therefore fees shall be paid to the County Clerk in accordance with Section 711.4(d) of the Fish and Game Code.

18. ENVIRONMENTAL DETERMINATION

The initial study for this project has been reviewed and the environmental determination, contained in Section V. preceding, is hereby approved:

Kirill Dolinskiy, PMP, Project Manager

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