BUREAU OF RECLAMATION

# National Environmental Policy Act Finding of No Significant Impact

**East County Advanced Water Purification Program**
**(Water Recycling Facilities – Phase 1 Expansion, Title XVI)**
**(East County Advanced Water Purification - Phase 2, WIIN Act)**
**Padre Dam Municipal Water District, San Diego County, California**


**U.S. Department of the Interior Region 8: Lower Colorado Basin** **May 2022**

# Mission Statements

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Cover photos (left to right): 1) existing 1 MGD Advanced Water Purification Demonstration Facility, 2) conceptual view of the proposed Advanced Water Purification Facility, 3) Lake Jennings. From the CEQA initial study prepared by Padre Dam MWD for the East County Advanced Water Purification Project (SCH# 2018091029).

— BUREAU OF —
RECLAMATION

**National Environmental Policy Act**
**Finding of No Significant Impact**

No. 16-SCAO-026-FONSI

Padre Dam Municipal Water District
East County Advanced Water Purification Program
San Diego County, California

The Bureau of Reclamation is providing federal funds for the Padre Dam Municipal Water District to expand recycled water production and implement the first phase of an indirect potable water reuse project by reservoir augmentation in San Diego County, California. Funding for Phase 2 has also been authorized by the Congress.

Based on our review of the Initial Study and Mitigated Negative Declaration for the *East County Advanced Water Purification Project*, California State Clearinghouse No. 2018091029, we have determined that the financial assistance does not constitute a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969. Preparation of an environmental impact statement on the proposed action is not required.

Recommended: DOUGLAS MCPHERSON Digitally signed by DOUGLAS MCPHERSON Date: 2022.05.25 13:08:30 -07'00' Date:_____
Doug McPherson, Environmental Protection Specialist

Reviewed By: BRETT MOONEY Digitally signed by BRETT MOONEY Date: 2022.05.25 13:30:42 -07'00' Date:_____
Brett J. Mooney, Regional Title XVI Coordinator

Approved: JOHN SIMES Digitally signed by JOHN SIMES Date: 2022.05.26 08:09:50 -07'00' Date:_____
John E. Simes, Jr., (Acting) Area Manager

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The Padre Dam Municipal Water District (Padre Dam MWD) has applied to the Bureau of Reclamation (Reclamation) for federal funds to expand the capacity of an existing water reclamation facility and to construct an Advanced Water Purification Facility with a conveyance pipeline to an existing reservoir for indirect potable reuse in San Diego County, California. Project implementation is planned in 3 phases. Phases 1 and 2 were evaluated in an initial study under the California Environmental Quality Act (CEQA).

Cooperative Agreement No. R16AC00104 provides Title XVI funds for Phase 1. The Phase 2 feasibility study was approved and funding under the Water Infrastructure Improvements for the Nation (WIIN) Act has been approved by Congress. Padre Dam MWD also applied to the Environmental Protection Agency (EPA) for funds under the Water Infrastructure Finance and Innovation Act (WIFIA) and to the California State Water Resources Control Board under the Clean Water State Revolving Fund (CWSRF).[1]

## PURPOSE AND NEED

Padre Dam MWD formed a Joint Powers Authority (JPA) with three other agencies[2] to expand recycled water production and to implement the East County Advanced Water Purification Program. The program will increase water supply reliability and may ultimately produce 30 percent of East San Diego County's potable water supply, reducing reliance on imported water and providing a drought-resistant, locally controlled water supply. The program will divert wastewater that would otherwise be discharged to the Pacific Ocean through the Point Loma Wastewater Treatment Plant and the Point Loma Ocean Outfall.

## AUTHORITY

Federal assistance is authorized by the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of Public Law 102–575, as amended). Section 1612, San Diego Area Water Reclamation Program, directs the Secretary of the Interior to participate in the planning, design, and construction of facilities to reclaim and reuse water in the San Diego metropolitan service area.

The WIIN Act (Public Law 114-322) was enacted on December 16, 2016, to address water resources infrastructure critical to the Nation's economic growth, health, and competitiveness. Section 4009(c) of Subtitle J amended Title XVI allowing new water recycling projects to be eligible for Federal funding if a feasibility study is approved.

Public Law 117-43, Division A, Section 123(c), enacted September 30, 2021, authorized WIIN Act funding for the East County Advanced Water Purification Program: Phase 2, as recommended by the Secretary of the Interior in a letter dated July 23, 2021.

## PROJECT DESCRIPTION

The project will upgrade an existing influent pump station, expand the treatment capacity of the existing Ray Stoyer Water Recycling Facility (WRF), construct new Solids Handling and Energy Recovery Facilities, construct a new Advanced Water Purification Facility, and construct new facilities to convey purified water to Lake Jennings, an existing reservoir 10 miles east. The existing East Mission Gorge Pump Station will be modified. A new force main and a new residuals bypass system will be constructed.

The project is primarily within the City of Santee and unincorporated Lakeside in east San Diego County. The Advanced Water Purification Facility will be built at the existing Ray Stoyer WRF property at 12001 Fanita Parkway in Santee. The new pipeline will convey purified water to Lake Jennings in Lakeside.

[1] The CWSRF program is partially funded by a capitalization grant from the EPA. Issuance of CWSRF funds is considered equivalent to a Federal action. The EPA delegated the California State Water Resources Control Board as a non-federal representative for carrying out the requirements of the Endangered Species Act and the National Historic Preservation Act.

[2] The East County Advanced Water Purification JPA was established in November 2019 pursuant to the Joint Exercise of Powers Act, California Government Code section 6500 et seq., and a Joint Exercise of Powers Agreement among Padre Dam MWD, the City of El Cajon, the County of San Diego and Helix Water District.

The Ray Stoyer WRF currently has a treatment capacity of 2 million gallons per day (MGD), producing 1.8 MGD of recycled water for non-potable reuse. The East County Advanced Water Purification Program will expand the Roy Stoyer WRF capacity to 18 MGD in 3 phases. Phases 1 and 2 may be combined into a single initial phase. The potential Phase 3 expansion is deferred to the future, if needed.

Phase 1 of the East County Advanced Water Purification Project will increase treatment capacity at the Ray Stoyer WRF to 6 MGD and will construct an Advanced Water Purification Facility with a conveyance pipeline to Lake Jennings and a biosolids digestion facility. Phase 1 will produce 3,900 acre-feet per year (AFY) of purified water delivered to Lake Jennings for reservoir augmentation and indirect potable reuse.

Phase 2 will increase the Ray Stoyer WRF treatment capacity to 15 MGD and will expand the Advanced Water Purification Facility by 8 MGD, from 3.5 MGD to 11.5 MGD. The solids handling facility will be expanded to process solids from the expanded WRF. Phase 2 will retrofit an existing pump station and install a new force main to convey additional wastewater to the expanded WRF with a new Residuals Bypass System. Phase 2 will create an additional 8,960 AFY (8 MGD) of purified water,

Future Phase 3 expansion may upgrade Ray Stoyer WRF to 21 MGD capacity and the Advanced Water Purification Facility to 15.5 MGD. The Phase 3 expansion will depend on future growth in the service area. A separate environmental review will be conducted if the Phase 3 expansion is needed.

The combined Phase1 and Phase 2 project includes the following components:

- Upgrade the existing influent pump station
- Expand the Ray Stoyer WRF to 15 MGD capacity
- Construct new Solids Handling and Energy Recovery Facilities
- Construct an Advanced Water Purification Facility up to 11.5 MGD capacity
- Construct facilities to convey purified water to Lake Jennings
- Construct Lake Jennings Facilities
- Modify the existing East Mission Gorge Pump Station and construct a force main
- Construct a Residuals Bypass System.

Influent Pump Station
The existing influent pump station controls wastewater with two sets of pumps: a low-head pump system to convey flows to Point Loma and a high-head pump system to the Ray Stoyer WRF. The high-head pump system capacity will be increased. Low-head pumps may also be upsized. Existing electrical, heating, ventilation, and air conditioning; odor control, surge protection, and Supervisory Control and Data Acquisition systems will be upgraded. A new chemical storage area will be added.

Ray Stoyer WRF Expansion
The Ray Stoyer WRF currently has a treatment capacity of 2.0 MGD. Phase 1 will increase the capacity to 6.0 MGD to produce 5.7 MGD of tertiary water for recycled water use and for advanced treatment. The expansion will enlarge the headworks and grit removal and add two primary clarifiers, an equalization tank, three secondary clarifiers, an additional rapid mix component, and cloth filters. The Phase 2 expansion will increase the Ray Stoyer WRF wastewater treatment capacity to 15 MGD.

Major improvements to the Ray Stoyer WRF will be completed within the limits of the existing facility, which includes the current location of the existing WRF and Pond A. The expansion requires Pond A to be dewatered and filled in, demolition of existing structures, and construction of new equipment and facilities, including a headworks building, odor control building, an additional generator building, primary and secondary clarifiers, bioreactors, an equalization basin, a blower building, a tertiary pump station, maintenance and operations buildings, chlorine contact tanks, electrical buildings and tertiary filters

Solids Handling and Energy Recovery Facility
The Solids Handling and Energy Recovery Facility will receive and process the primary and waste activated sludge from the Ray Stoyer WRF. The sludge will be thickened and fed to anaerobic digesters for solids stabilization and production of Class B biosolids. The stabilized solids will be dewatered

discharged to trucks for hauling offsite. A portion of the generated biogas will be used in boilers for heating the digesters, with excess biogas being flared on-site. Construction involves demolition of existing structures and construction of new structures including a solids thickening and dewatering building, digesters, a digester control building, a waste gas burner, provisions for a future high strength waste receiving station, and a gas conditioning and cogeneration building.

Advanced Water Purification Facility

The new Advanced Water Purification Facility will have a Phase 1 capacity of 3.5 MGD for potable reuse. The facility will purify tertiary recycled water from the expanded Ray Stoyer WRF with microfiltration, reverse osmosis, and advanced oxidation. The Phase 2 facility will provide full advanced purification up to 11.5 MGD. The facility will include a visitor center, process building, chemical storage, maintenance and electrical buildings, process tanks, and pump stations.

Pipeline and Pump Station to Lake Jennings

Purified product water will be conveyed to Lake Jennings by a new 10-mile long, 24-inch diameter pipeline. A 500-HP pump station at the Advanced Water Purification Facility will convey the water to a new de-chlorination facility then through the existing El Monte tunnel to a cascading water feature at the Lake Jennings inlet. Construction of the de-chlorination facility will involve demolition of the existing El Monte Pumphouse. Project water will mix with native and imported water in Lake Jennings before being pulled out for additional treatment at the existing Levy Water Treatment Plant for potable consumption.

Lake Jennings Facilities

Purified water will enter Lake Jennings at the inlet via a 220- to 300-foot-long cascading water feature. On the west side of Lake Jennings, an air curtain consisting of new compressors and air supply lines at the bottom of the lake will be installed to promote mixing in the lake. A new building containing two 200-hp aeration blowers will be constructed next to an existing building on the western shoreline. Power to the building will be provided by San Diego Gas & Electric. A new 250-kW generator will be installed to provide backup power to the compressors.

East Mission Gorge Pump Station Modifications and Force Main

The East Mission Gorge Pump Station is an existing City of San Diego facility that currently conveys wastewater from East San Diego County to the North Mission Valley Interceptor and ultimately to the Point Loma wastewater treatment plant The project will modify the existing facilities and construct a new 30-inch diameter force main to deliver 9.0 MGD of wastewater to the Ray Stoyer WRF. The force main will be 18,200 feet in length.

Residuals Bypass System

The Residuals Bypass System will discharge brine from the Advanced Water Purification Facility and centrate from the Solids Handling and Energy Recovery Facility to the East Mission Gorge Interceptor downstream from the East Mission Gorge Pump Station. The Residuals Bypass System will slipline 8,800 feet of existing 24-inch sludge line in Sycamore Canyon Road, construct 3,100 feet of new 16-inch diameter gravity pipeline, 3,500 feet of new 12-inch diameter force main, and a 1.7 MGD lift station.

Regional Brine Line

A modification currently under environmental review[3] proposes a regional brine line to convey residuals around Pure Water San Diego Program facilities. Pure Water San Diego is a phased, multi-year program to provide more than 50 percent of San Diego's water supply locally by the end of 2035 using advanced water treatment to purify recycled water, producing safe, high-quality drinking water.

The proposed regional brine line would satisfy San Diego's requirement of not re-treating wastewater residuals at Pure Water San Diego facilities, preserves the quality of wastewater delivered for purification, and would also conserve treatment capacity of the Pure Water Program facilities. Instead of discharging residuals to the existing gravity line as currently designed, the regional brine line would be installed within the existing East Mission Gorge Force Main pipeline, extending from the existing East Mission Gorge Pump Station to the South Mission Valley Trunk Sewer downstream of the Pure Water San Diego intake.

[3] On April 26, 2022, the East County Advanced Water Purification JPA released a notice of intent to adopt a Subsequent Mitigated Negative Declaration for the proposed regional brine line. The public comment period ends May 26, 2022. (SCH No. 2022040551).

## ADOPTION OF EXISTING ENVIRONMENTAL DOCUMENT

NEPA requires review of a proposed Federal action to determine its impact on the human environment. Council on Environmental Quality (CEQ) regulations direct Federal agencies to cooperate with State and local agencies to reduce duplication between NEPA and State and local requirements (40 CFR 1506.2). Department of Interior regulations for implementing NEPA encourage tiering of environmental documents and provide for adoption of existing environmental documents if, upon evaluation by a responsible official, it is found to comply with relevant provisions of the CEQ regulations.

Reclamation staff reviewed the CEQA Initial Study for the East County Advanced Water Purification Project (California State Clearinghouse No. 2018091029) and concluded that the document adequately identifies and discloses the reasonably foreseeable environmental effects of the proposed action. We adopt the Initial Study in accordance with regulations for implementing NEPA promulgated by the CEQ at 40 CFR 1506.3 and by the Department of the Interior at 43 CFR 46.320(a).

## SUMMARY OF FINDINGS

The Initial Study concluded that the project could cause significant environmental effects but measures to avoid or reduce impacts were identified and made conditions of approval. On December 5, 2018, the Padre Dam MWD adopted a Mitigated Negative Declaration, a determination that no environmental impact report is required under CEQA. A Notice of Determination was filed with the California State Clearinghouse on December 7, 2018.

On February 20, 2020, the East County Advanced Water Purification JPA considered the Mitigated Negative Declaration adopted by Padre Dam MWD, adopted the Mitigation Monitoring and Reporting Program; and approved the project. The JPA filed a Notice of Determination with the San Diego County Clerk on March 12, 2020. The State Clearinghouse received and filed the JPA Notice of Determination on August 8, 2021.

EPA completed Federal Cross-Cutting Authorities Review for East County Advanced Water Purification Project on April 12, 2021. WIFIA Loan Agreement No. 41CA was approved on September 9, 2021. The California State Water Resources Control Board filed a Notice of Determination on April 14, 2022, and approved CWSRF No. C-06-8133-110 for project funding.

## OTHER CONSIDERATIONS

Clean Air Act
The San Diego Air Basin is a designated non-attainment area for ozone, PM10 and PM2.5. Estimated air emissions during both construction and operation are below the Clean Air Act conformity applicability *de minimis* thresholds [40 CFR 93.153 (b)]. No Clean Air Act conformity determination is required.

Safe Drinking Water Act
The State of California has issued regulations for indirect potable reuse via surface water augmentation. Padre Dam Municipal Water District completed the initial hydrodynamic modeling of Lake Jennings and demonstrated its suitability as an environmental buffer. Conceptual Project Approval was received from the Division of Drinking Water in 2017. Lake Jennings has sufficient capacity to provide the required residence time and dilution criteria set forth in the Surface Water Augmentation Regulations for the entire volume of water recycled by the expanded Ray Stoyer WRF in Phase 1 and Phase 2.

Endangered Species Act
Portions of the project are within critical habitat designated for endangered least Bell's vireo (*Vireo bellii pusillus*), threatened coastal California gnatcatcher (*Polioptila californica californica*), and endangered arroyo southwestern toad [*Anaxyrus californicus* (*Bufo microscaphus californicus*). Vireo and gnatcatcher have been observed within the action area. Permanent impacts to sensitive habitats will be mitigated with offsite conservation. Temporary impacts will be restored in accordance with a restoration plan.

National Historic Preservation Act
Six historic resources are within the Area of Potential Effect:

- P-37-011296/CA-SDI-11296 San Diego Flume and El Monte Tunnel
- P-37-034482 El Monte Pump Station
- P-37-034486 Historic pipeline associated with the El Monte Pump Station distribution network.
- P-37-010148, prehistoric habitation site
- P-37-038827 Ray Stoyer WRF
- P-37-038826 Chet Herrit Dam

The San Diego Flume and El Monte Tunnel property is eligible for listing in the National Register of Historic Places. The flume itself is no longer present. The other five historic properties were determined ineligible for listing in the National Register of Historic Places.

Construction of the de-chlorination facility involves demolition of the El Monte Pumphouse. Approximately 900 feet of new purified water pipeline will replace the existing above-ground water facilities (pipeline and saddle supports) associated with the El Monte pump station. Another 1,100 feet of purified water pipeline will be installed above ground to the historic El Monte Tunnel with 365 feet of pipeline routed through the historic El Monte Tunnel. The tunnel segment will be designed in coordination with a qualified Historic Preservation Specialist and the State Historic Preservation Officer following the Secretary of the Interior Standards for the Treatment of Historic Properties.

Migratory Bird Treaty Act
Project activities requiring removal and/or trimming of vegetation suitable for nesting birds will occur outside of the general bird breeding season (January 15 to September 15) to the extent feasible. If the activities cannot avoid the general bird breeding season, a qualified biologist will conduct a pre-activity nesting bird survey within seven days prior to the activities to confirm the presence or absence of active bird nests. If an active bird nest is found, vegetation removal or trimming activities will not be allowed until the biologist determines that the nest is no longer active. Avoidance buffers should start at 300 feet for passerine birds and 500 feet for raptors, but can be reduced at the discretion of the biologist

Wetlands and Floodplain
Construction of the new inlet to Lake Jennings will result in permanent impacts to 0.3 acre of freshwater marsh. Expansion of facilities at the Ray Stoyer WRF will fill man-made seasonal Ponds A and B by draining the ponds and filling the dry bed with soil. The ponds are not considered Waters of the United States and are not subject to Clean Water Act section 404.

Several mapped 100-year floodplains are located within or adjacent to the project areas. Project components near the San Diego River and the associated floodplain are pipelines located underground. Impacts from expansion of the Ray Stoyer WRF will be mitigated by rerouting surface drainage to maintain existing drainage patterns where feasible, minimizing installation of new impervious surfaces, locating facilities outside of mapped 100-year floodplain boundaries, and using best management practices to raise and protect structures.

Clean Water Act
The existing discharge from the Ray Stoyer WRF to Sycamore Creek is regulated under National Pollutant Discharge Elimination System (NPDES) permit no. CA0107492, issued by the San Diego Regional Water Quality Control Board February 9, 2022 (Order No. R9-2022-0003). Padre Dam MWD or the JPA will submit a new Report of Waste Discharge (ROWD) at least 180 days prior to operation and discharge from the expanded Ray Stoyer WRF and the Advanced Water Purification Facility.

Socioeconomic Resources
Adverse socioeconomic impacts are not expected. The project will provide drought year reliability, improve local water supplies, sustain municipal water demands, and support economic vitality in the area. The project will not induce population growth. No housing or people will be displaced. No communities will be divided. No effects to public health and safety were identified. Economic or social effects are not intended by themselves to require preparation of an EIS (40 CFR 1508.14).

Environmental Justice
Two census block groups along the purified water pipeline have low-income populations 10% or greater than the state and county levels. The project does not involve disproportionately high and adverse human health or environmental effects on minority and low-income populations. Construction will temporarily inconvenience residents along the pipeline routes. There is no potential to adversely impact any low income or ethnic communities in the long term.

Climate Change
The project will result in a net increase of 7,537 metric tons carbon dioxide equivalent (MT CO2e) per year without cogeneration and 4,389 MT CO2e with cogeneration, mainly due to energy sources.

Farmland Protection Policy Act
No Prime or Unique Farmlands or Farmlands of Statewide Importance are mapped in the project area. The project is identified as "Urbanized Area" (UA) on the Census Bureau Map.

Indian Trust Assets
No Indian Trust Assets are involved.

Wild and Scenic Rivers
No Wild and Scenic Rivers or rivers listed on the National Rivers Inventory are in the project area.

Coastal Zone
The project is located 18 miles east of the California Coastal Zone boundary.

Sole Source Aquifers
Only four sole-source aquifers are designated in California. None are near the proposed project.

## AGENCY CONSULTATION AND COORDINATION

Fish and Wildlife Service
On September 16, 2020, the Fish and Wildlife Service concurred with EPA's determination that the action is not likely to adversely affect endangered least Bell's vireo, threatened coastal California gnatcatcher, threatened arroyo toad, or their designated critical habitats.

California State Historic Preservation Officer (SHPO)
On March 11, 2021, the SHPO concurred with State Water Resources Control Board determinations of ineligibility for five sites, eligibility of the San Diego Flume and El Monte Tunnel property for listing on the National Register of Historic Places, and that the undertaking will not adversely affect historic properties.

## ENVIRONMENTAL COMMITMENTS

The attached Mitigation Monitoring and Reporting Plan was adopted by Padre Dam MWD and the JPA. The CEQA mitigations are considered ameliorative design elements per 43 CFR 46.130(b). No additional environmental commitments are required by Reclamation.

## REFERENCES

East County Advanced Water Purification Project, Final Initial Study/Mitigated Negative Declaration (SCH# 2018091029), December 2018, HELIX Environmental Planning, Inc., La Mesa, CA
https://www.eastcountyawp.com/DocumentCenter/View/153/Mitigated-Negative-Declaration-PDF

## ATTACHMENTS

1. California SHPO concurrence
2. US Fish and Wildlife concurrence
3. Mitigation Monitoring and Reporting Program

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

**DEPARTMENT OF PARKS AND RECREATION**
**OFFICE OF HISTORIC PRESERVATION**
Lisa Ann L. Mangat, *Director*

**Julianne Polanco, State Historic Preservation Officer**
**1725 23rd Street, Suite 100, Sacramento, CA 95816-7100**
**Telephone: (916) 445-7000 FAX: (916) 445-7053**
**calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov**

March 11, 2021 Reply in Reference To: EPA_2016_0201_002

Wendy Pierce
Senior Environmental Scientist
Division of Financial Assistance
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Sent Via Electronic Mail

Re: Continuing Consultation, East County Advanced Water Purification Project, San Diego County

Dear Ms. Pierce:

On behalf of the United States Environmental Projection Agency, the State Water Resources Control Board (Water Board) is consulting with the State Historic Preservation Officer (SHPO) in an effort to comply with Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 306108), as amended, and its implementing regulations at 36 CFR Part 800. The Water Board is requesting SHPO comments on the above-referenced undertaking's Area of Potential Effects (APE) and a finding of no adverse effect.

The original applicant, Padre Dam Municipal Water District, joined with other agencies to form a Joint Powers Authority (JPA) and is now the East County Advanced Water Purification JPA. The Undertaking scope has also changed considerably. The APE has been expanded, a new identification report has been prepared, and the original finding of "no historic properties affected" is no longer appropriate. The StateWater Board is now entering into consultation with SHPO on a finding of "no adverse effect" pursuant to 36 CFR Section 800.5(b). In support of this undertaking, the Water Board has provided the following study:

- *East County Advanced Water Purification Project, Cultural Resources Inventory and Assessment* (Helix Environmental Planning, September 2018)
- *El Monte Tunnel Rehabilitation Plan* (Helix Environmental Planning, December 18, 2019)

Originally, the APE was a small area centered within the Ray Stoyer Water Reclamation Facility (WRF), but has now grown to a much larger project that includes expansion of existing and construction of new facilities

within the WRF including a solids handling and energy recovery building and an advanced water treatment plant. A purified water conveyance pipeline will convey treated water from the WRF to a dichlorination facility at the El Monte Pump Station, then through the El Monte Tunnel, and into Lake Jennings. Work around Lake Jennings includes an aeration blower and generator building on the Chet Herrit Dam, an air supply line and air curtain in the reservoir, and a water feature at the Lake Jennings Inlet. Other work to increase the conveyance of wastewater to the WRF includes modifications to the East Mission Gorge Pump Station, construction of a sewer force main, and a residuals bypass system.

The pipelines will be constructed using a combination of open trenching, horizontal directional drilling (HDD), and jack and bore. The open trench will have an excavation depth of approximately eight feet. The HDD will involve the excavation of entrance and exit pits that are approximately six feet wide by 20 feet long by ten feet deep. At storm drain crossings, the jack and bore entrance shafts will be a maximum of 14 feet in width by 40 feet in length, while the receiving shafts will be a maximum of 12 square feet. The depth of the shafts is anticipated to be a maximum of 15 feet. At the crossing of State Route 67, the jack and bore entrance shafts will be a maximum of 16 feet in width by 40 feet in length, while the receiving shafts will be a maximum of 12 square feet. The depth of the shafts is anticipated to be a maximum of 20 feet.

In an effort to identify historic properties in the APE, the Applicant contracted HELIX to complete a cultural study. The study includes a records search of files at the South Coastal Information Center (SCIC) and The California Native American Heritage Commission, Native American outreach, and a pedestrian archeological survey of the APE. The results of the SCIC records search indicated that 58 cultural resource studies were completed within portions of the APE. Seven cultural resources are recorded within the APE and 106 are recorded within a half-mile and outside of the APE.  No historic properties were identified in the archaeological field survey.

The following six resources were identified within the APE:

- P-37-010148, a prehistoric habitation site determined ineligible for the National Register of Historic Places (NRHP)
- San Diego Flume and El Monte Tunnel (P-37-011296/CA-SDI-11296), evaluated and recommended eligible for the inclusion on the NRHP under Criteria A and C
- El Monte Pump Station (P-37-034482), evaluated and recommend ineligible for listing on the NRHP under all criteria
- El Monte Pump Station Pipelines (P-37-034486), evaluated and recommended as ineligible for listing on the NRHP under all criteria
- Ray Stoyer WRF (P-37-038827), evaluated and recommended as ineligible for listing on the NRHP under all criteria
- Chet Herrit Dam (P-37-038826), evaluated and recommended as ineligible for listing on the NRHP under all criteria

One of the resources identified in the APE appears to be a historic property, the San Diego Flume and El Monte Tunnel.  In order to avoid adverse effects to the property, the El Monte Tunnel Historic Property Treatment Plan (Treatment Plan) was written and will be implemented to resolve potentially adverse effects to the resource. It identifies methods described in the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Preserving, Rehabilitating, Restoring, and Reconstructing,

Historic Buildings (Grimmer 2017; Weeks and Grimmer 1995) and specifies that a qualified architectural historian will be required to work with the engineers on the Design-Build team.

Of the six resources in the APE, only P-37-010148 has previously been the subject of a consensus determination and was determined ineligible. Five other resources in the APE were evaluated for listing on the NRHP for this Undertaking. The Water Board has determined four of these resources, P-37-034482, P-37-034486, PP-37-038826, and P-37-038827 are not eligible for listing on the NRHP and seek SHPO concurrence on our determination of eligibility pursuant to 36 CFR Section 800.4(c)(2). The Water Board has determined the San Diego Flume and El Monte Tunnel is eligible for listing on the NRHP.

The Water Board has reached a finding that with the implementation of the Treatment Plan, historic properties will not be adversely affected by the Undertaking. Therefore, the Water Board is seeking SHPO concurrence on he finding of “no adverse effect” pursuant to 36 CFR Section 800.5(b).

Having reviewed your submittal, SHPO has the following comments:

1) SHPO agrees that the APE is adequate to account for direct and indirect effects to historic properties;

2) SHPO concurs that P-37-034482, P-37-034486, PP-37-038826, and P-37-038827 are ineligible for listing on the NRHP;

3) SHPO concurs that the San Diego Flume and El Monte Tunnel are eligible for listing on the NRHP;

4) SHPO concurs that the undertaking will not adversely affect historic properties.

If the Water Board has any questions or comments, please contact Associate State Archaeologist Jeffrey Delsescaux at (916) 445-7016 or Jeffrey.Delsescaux@parks.ca.gov.

Sincerely,

Julianne Polanco
State Historic Preservation Officer

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**United States Department of the Interior**
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer to:
FWS-SD-16B0199-20I1546

September 16, 2020
*Sent Electronically*

D. Isaiah Larsen
U.S. Environmental Protection Agency, Region IX
Water Division, Infrastructure Section (WTR-3-3)
75 Hawthorne Street
San Francisco, California 94105

Subject: Informal Section 7 Consultation for the East County Advanced Water Purification Project, City of Santee and Unincorporated San Diego County, California

Dear D. Isaiah Larsen:

On July 10, 2020, we received your letter requesting a revision to our concurrence that the proposed East County Advanced Water Purification Project, formerly the Ray Stoyer Water Recycling Facility, is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo), federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher), arroyo toad {a. southwestern t. [*Anaxyrus californicus* (*Bufo microscaphus c.*)]; arroyo toad}, or their designated critical habitats. The revision is necessary because the current project has a larger project area and adds arroyo toad to the analysis. Your agency proposes to provide partial funding to the Padre Dam Municipal Water District, the Applicant. Our evaluation is based on information provided with your concurrence request, including the Biological Resources Report for the East County Advanced Water Purification Project, prepared by Helix Environmental Planning, Inc. (Helix), and dated November 26, 2018, an Environmental Response to Comments, prepared by Helix, and dated September 3, 2020, and other information in our files.

The project site includes locations in the northern portion of the City of Santee and in the unincorporated community of Lakeside. The proposed project includes upgrades to the existing influent pump station, expansion of the Ray Stoyer Water Recycling Facility, construction of a Solids Handling and Energy Recovery Facility, construction of an Advanced Water Treatment Plant (AWTP) Facility, and construction of facilities to convey purified water from the AWTP Facility to Lake Jennings, which is owned and operated by the Helix Water District. Additionally, the proposed project includes modifications to the East Mission Gorge Pump Station and construction of a force main, and a residuals bypass system.

Permanent impacts to sensitive resources, including habitat for the vireo, gnatcatcher, and arroyo toad, will be mitigated with offsite conservation at the following conservation to impacts ratios: 0.5:1 for non-native grass, 2:1 for coastal sage scrub, 3:1 for southern willow scrub, and 1:1 for

open water. All temporary impacts to sensitive habitat will be restored in accordance with a restoration plan. To avoid and minimize indirect impacts to both vireo and gnatcatcher, the following measures will be adhered to:

1. If operation of construction equipment starts during the breeding season for the gnatcatcher (March 1 to August 15) or vireo (March 15 to September 15), pre-construction survey(s) will be conducted by a permitted biologist to determine whether these species occur within 500 feet of the construction activities. If it is determined at the completion of pre-construction surveys that active nests belonging to these species are absent from the potential impact area, construction shall proceed. If pre-construction surveys determine the presence of active nests belonging to either species, then construction shall be postponed until after the breeding season or a permitted biologist determines the nest(s) is no longer active if feasible. If construction must occur while the nest(s) is active, construction shall not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient. Decibel output will be confirmed by a qualified noise specialist and intermittent monitoring by a qualified biologist will be required to ensure that conditions have not changed. If required, the temporary noise barrier or berm shall be kept in place until completion of the construction activities within 500 feet of the active nest(s). This measure will be implemented each nesting season during the construction period**.**

2. If either of these two species establish breeding territories and produce active nests while construction activities are ongoing without stopping, then it shall be assumed that the activities are having no adverse effects and shall be allowed to continue without stopping. If construction activities stop for more than 7 days during the breeding seasons for either of these two species, then a pre-construction survey shall be repeated by the U.S. Fish and Wildlife Service-permitted biologist to confirm that no new nests have been produced in areas that could be adversely affected from reinitiating construction activities.

Vireos have been observed consistently within riparian habitat northwest of the project site near the Ray Stoyer Water Recycling Facility, and a single male was observed near Hanson Pond along the San Diego River. There will be up to 0.21 acre of temporary impacts to vireo habitat in several small, isolated stands of 1-3 trees and/or shrubs near the Horizontal Directional Drill Staging Area northwest of the intersection of Mast Boulevard and State Route 52. There will be no permanent impacts to vireo habitat. The project will temporarily impact 2.6 acres of designated vireo critical habitat that does not contain physical or biological features (pbfs) of critical habitat. There will be no impacts to vireo critical habitat with pbfs and no permanent impacts to any vireo critical habitat.

Five pairs of gnatcatchers and two individuals were observed within approximately 500 feet of the project site during surveys in 2018, including one observation immediately adjacent to potential direct disturbance. Gnatcatcher observations were spread throughout the project area within suitable habitat. There will be a total of 7.8 acres of temporary impacts to gnatcatcher

habitat spread over the 13.7-mile pipeline alignment and an additional 0.7 acre of permanent impacts near the Lake Jennings inlet. No gnatcatchers were found within 1,000 feet of the Lake Jennings inlet during 2018 surveys. There will be 19.2 acres of temporary impacts to gnatcatcher critical habitat, including 2.4 acres with pbfs, and 0.9 of permanent impacts to gnatcatcher critical habitat, including 0.7 acre with pbfs at the Lake Jennings inlet.

There will be no temporary or permanent impacts to occupied arroyo toad habitat. There will be 4.9 acres of temporary impacts and 0.2 acre of permanent impacts to arroyo toad critical habitat, but all impacts within arroyo toad critical habitat will be within previously developed or disturbed land with no pbfs.

Project-related impacts to vireo habitat will be small, temporary, and dispersed, and indirect impacts to vireos will be minimal with implementation of the proposed minimization and avoidance measures. Overall, the impacts to vireo will be insignificant in that they will not be able to be meaningfully detected, and there will be no impacts to vireo critical habitat with pbfs. Project-related impacts to gnatcatcher habitat will be small, mostly temporary, and dispersed along the length of the project alignment, and indirect impacts to gnatcatchers will be minimal with implementation of the proposed minimization and avoidance measures. Permanent impacts to gnatcatcher habitat, including critical habitat with pbfs, will be concentrated in an area that is not currently occupied by gnatcatchers. Overall, the impacts to gnatcatchers and their critical habitat will be insignificant in that they will not be able to be meaningfully detected. There will be no impacts to occupied arroyo toad habitat or arroyo toad critical habitat with pbfs. Therefore, based on the information provided, we concur with your determination that the proposed action is not likely to adversely affect the vireo, gnatcatcher, arroyo toad, or their designated critical habitats. The interagency consultation requirements of section 7 of the Act have been satisfied.

This completes our informal consultation; however, obligations under section 7 of the Act should be reconsidered if: 1) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not previously considered, 2) this action is subsequently modified in a manner that was not considered, or 3) a new species is listed or critical habitat designated that may be affected by the action. If you should have any questions pertaining to this letter, please contact Eric Porter of this office at 760-431-9440, extension 285.

Sincerely,

for Susan Wynn
Acting Assistant Field Supervisor

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Padre Dam Municipal Water District
East County Advanced Water Purification Project

# MITIGATION MONITORING AND REPORTING PROGRAM

The California Environmental Quality Act (CEQA) requires the adoption of feasible mitigation measures to reduce the severity and magnitude of potentially significant environmental impacts associated with project development. To ensure that the mitigation measures identified in a Mitigated Negative Declaration (MND) are implemented, the public agency adopts a program for monitoring and reporting the measures it has imposed to mitigate or avoid significant effects [Section 15097 (a)]. The State CEQA Guidelines require that a mitigation monitoring and reporting program (MMRP) be adopted at the same time that the MND is adopted.

According to Section 15097(c) of the State CEQA Guidelines, reporting generally consists of a written compliance review that is presented to the decision-making body or authorized staff person. A report may be required at various stages during project implementation or upon completion of the mitigation measure. Monitoring is generally an ongoing or periodic process of project oversight. This program identifies the party responsible for implementing the action, the timing for the implementation of each measure, and the procedure for documenting the mitigation efforts.

The Padre Dam Municipal Water District (District) is responsible for the implementation and monitoring of the measures during design and construction of the East County Advanced Water Purification (ECAWP) project components unless otherwise stated herein. Table 1, MMRP Summary, provides a summary of the mitigation measures required as part of the project MND, including the responsible party, mitigation timing, and monitoring and reporting procedure. References to "contractor" as responsible party imply they are generally under contract to the District staff that are ultimately responsible. A reference to a "qualified consultant" as a responsible party implies they are generally under contract to the District staff that are ultimately responsible. The District may impose requirements for implementation of the measures on other parties responsible for constructing ECAWP project components that would require approval from the District.

The District may modify how it will implement a mitigation measure, as long as the alternative means of implementing the mitigation still achieves the same or greater attenuation of the impact.

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **AESTHETICS** | | | | | |
| **CFMP Aes-1 Construction Visual Disturbance Minimization Measures**. The following measures would be incorporated into the design and construction of project components that involve ground disturbance or construction within trails to minimize potential effects on aesthetics to neighborhoods surrounding the projects:<br>• Demolition debris will be removed in a timely manner for off-site disposal.<br>• Tree and vegetation removal will be limited to the extent needed to facilitate project construction and access to the site.<br>• Construction lighting will be shielded or directed away from adjacent residences.<br>• All roadway and trail features (signs, pavement delineation, roadway surfaces, etc.) and structures will be protected, maintained in a temporary condition, or restored.<br>• Disturbed areas will be restored following construction consistent with original site conditions and surrounding vegetation. If removed vegetation included invasive plant species, the restored area shall be revegetated with a mix of native, non-invasive plants that are compatible with the surrounding setting. If necessary, a temporary irrigation system will be installed and maintained by the District, or watering trucks will be used at a frequency to be determined by the District to maintain successful plant growth. For proposed CFMP pipeline projects that would require trenching or that would require the temporary removal of concrete or asphalt, the disturbed area will be repaved to be consistent with the existing material. | District, contractor | Incorporated into construction documents during project design<br>Implemented during construction<br>Disturbed areas are to be restored post construction | District to confirm review on project plans and contractor to confirm conditions upon completion of construction | | |
| **CFMP Aes-4 Shielding for Security Lighting.** To reduce impacts related to creating a new source of lighting, new security lighting for the proposed project will be low illumination, shielded, and directed downward to prevent light and glare from affecting neighboring properties. | District, contractor | During project design | District to confirm incorporation of measures on design plans | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **AIR QUALITY** | | | | | |
| **CFMP Air-1 Site-Specific Air Quality Analysis Related to Blasting.** Prior to the commencement of blasting activities, the District shall require the preparation of a project-specific air quality impact analysis by a qualified air quality consultant if project construction involves blasting to verify that blasting emissions are less than the daily SDAPCD significance thresholds listed in Table 4.2-4 of the PEIR. If blasting results in exceedances of emissions thresholds, the District shall implement additional measures to reduce emissions to within SDAPCD daily screening level thresholds. These measures may include reducing the size, extent, or number of blasting events on a given day. The specific additional measures, if required, shall be determined by the qualified air quality consultant based on the results of the final air quality analysis. If the measures are unable to reduce emissions to within SDAPCD daily screening level thresholds, no blasting shall occur. In this scenario, any substitute method for blasting shall also have an air quality analysis performed as described above that demonstrates the emissions would be within SDAPCD screening level thresholds. | District-approved qualified air quality consultant | Analysis to be prepared prior to blasting activities | District-approved air quality consultant to confirm whether measures are required to limit blasting emissions to daily limits. If required, District to confirm restrictions are included on construction documents. | | |
| **BIOLOGICAL RESOURCES** | | | | | |
| **CFMP Bio-1B Rare Plant Avoidance and Mitigation.** If a significant population of rare plant species with CNPS California Rare Plant Rank 1A, 1B, 2A, or 2B is identified within a project impact area, then to the extent feasible to implement the project, the District shall avoid impacts to the population through project-level design changes and/or construction methods (e.g., trenchless installation of pipelines). The significance of the population shall be determined by the District-retained qualified biologist and analyzed during the project-level CEQA documentation, unless otherwise determined in consultation with the USFWS and CDFW.<br><br>If complete avoidance is determined not to be feasible, then the District shall restrict and minimize impacts to no more than 20 percent of the population, which is consistent with the regional standards identified for the MSCP. Mitigation for unavoidable impacts shall include one or a combination of the following and occur at a 1:1 to 3:1 ratio, depending on the sensitivity of the species and population size, as determined by the District-retained qualified biologist: | District, District-approved qualified biologist, contractor | During construction for avoidance; for compensation, per resource agency permit requirements (as applicable) or in a timely manner | For avoidance, District-approved qualified biologist to verify compliance with measures.<br><br>For compensatory mitigation, District to confirm recordation in mitigation bank and note in project environmental documentation. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-1B Rare Plant Avoidance and Mitigation (cont.)**<br>a. Purchase of preservation credits of occupied habitat from a conservation bank approved by the USFWS and CDFW;<br>b. Acquisition and preservation of off-site mitigation land containing occupied habitat; and/or<br>c. Preparation and implementation of a rare plant salvage and relocation plan, to include the following requirements, at a minimum:<br>i. Evaluation of options for plant salvage and relocation, including native plant mulching, selective soil salvaging, application of plant materials on manufactured slopes, and application/relocation of resources within existing or proposed preserved lands;<br>ii. Seed collection and/or transplantation to a suitable receptor site based on the most reliable methods of successful relocation;<br>iii. Recommendation for method of salvage and relocation/application based on feasibility of implementation and likelihood of success; and<br>d. Implementation plan, maintenance and monitoring program, estimated completion time, and any relevant contingency measures. | | | | | |
| **CFMP Bio-1F Avoidance of Nesting Birds and Raptors.** To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and CFG Code, the District shall enforce the following:<br>Project activities requiring the removal and/or trimming of vegetation suitable for nesting birds shall occur outside of the general bird breeding season (January 15 to September 15) to the extent feasible. If the activities cannot avoid the general bird breeding season, a qualified biologist shall be retained to conduct a pre-activity | District-approved qualified biologist, contractor | Within seven days prior to construction activities if during bird breeding season | District to confirm measure is in bid packages<br>District-approved qualified biologist to provide | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-1F Avoidance of Nesting Birds and Raptors (cont.)**<br>nesting bird survey within seven days prior to the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the qualified biologist, then the activities shall proceed with the reassurance that no violation to the MBTA and CFG Code would occur. If an active bird nest is found by the qualified biologist, then vegetation removal and/or trimming activities at the nest location shall not be allowed to occur until the qualified biologist has determined that the nest is no longer active. Avoidance buffers should start at 300 feet for passerine birds and 500 feet for raptors. However, buffers could be reduced at the discretion of the qualified biologist depending on the bird species and project activities required in the vicinity of the active nest. | | Contractor to submit construction schedule for approval at start of construction | confirmation of nesting bird survey results to District. | | |
| **CFMP Bio-1H Orange Construction Fencing and Construction Monitoring**. The District shall retain a qualified biologist to monitor construction activities and supervise the installation of temporary orange construction fencing, which clearly delineates the edge of the approved limits of grading and clearing, and the edges of environmentally sensitive areas that occur beyond the approved limits. This fencing shall be installed prior to construction and maintained for the duration of construction activity. Fencing shall be installed in a manner that does not impact habitats to be avoided. Once fencing is installed, the District and qualified biologist shall determine the need for additional inspections and monitoring activities throughout the duration of construction. If determined necessary by the District and qualified biologist, monitoring shall include inspection of construction work areas, including staging and storage areas, to confirm that activities are kept within the approved limits and that Best Management Practices are in place to prevent incidental animal entrapment and burrow and nest establishment within equipment and staged materials. Monitoring shall also include pre-activity surveys of construction and staging areas each morning on active construction sites to confirm special-status species remain absent from work areas. If work occurs beyond the fenced or demarcated limits of impact, or if a trapped animal or burrow or nest is found, work in the affected areas shall cease until | District-approved qualified biologist, contractor | During construction | District-approved qualified biologist to confirm that measures were implemented during construction. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-1H Orange Construction Fencing and Construction Monitoring (cont.)**<br><br>the problem has been remedied and mitigation identified by the District and qualified biologist. Temporary orange fencing shall be removed upon completion of construction of the project. Implementation of this measure shall be verified by the District prior to and concurrent with construction. | | | | | |
| **CFMP Bio-1I Construction-Related Noise.** If construction begins during the general breeding season (January 15 to September 15), construction noise could affect the breeding of the coastal California gnatcatcher and/or least Bell's vireo. No loud construction noise (exceeding an hourly average of 60 dBA, or 3 dBA above hourly average ambient noise levels at the nesting site, whichever is higher) may take place within 500 feet of active nesting sites during the general breeding season (January 15 to September 15).<br><br>Noise levels may be mitigated with a noise control barrier. The noise barriers may be 10 feet in height and be located between the facilities' construction operations and adjacent sensitive habitat to the east and west of the project construction site.<br><br>The barriers shall be solid and may be constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks should be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and be at least ¾-inch thick or have a surface density of at least 3.5 pounds per SF. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation. | District-approved qualified biologist, contractor | During construction | District-approved qualified biologist to confirm compliance with noise limits | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-1J Construction Staging Areas***.* The District shall design final project construction staging areas such that no staging areas shall be located within sensitive habitat areas. The construction contractor shall receive approval by the District prior to mobilization and staging of equipment outside of the project boundaries. | District-approved qualified biologist, contractor | During project design if within project boundaries<br>Prior to construction if outside of project boundaries | District-approved qualified biologist to confirm staging areas | | |
| **CFMP Bio-1K Contractor Training.** The District shall retain a qualified biologist to provide environmental awareness training by attending pre-construction meetings to inform construction crews of the sensitive resources and associated avoidance and/or minimization requirements. This will also include training for new crewmembers who join the project crew after construction begins. The training shall educate crews on the 12 special status species with high potential to occur in the project area. The crews will be informed to not interfere with these species if seen, and to contact the qualified biologist immediately for additional avoidance and minimization measures. | District-approved qualified biologist, contractor | Prior to construction | District-approved qualified biologist to confirm that training for workers occurred prior to them performing construction | | |
| **CFMP Bio-2A Compensatory Mitigation for Impacts to Sensitive Natural Communities.** The District shall compensate the loss of habitat according to the ratios provided in the table below, which could be adjusted during project-level studies and in coordination with the project biologist depending on where the compensatory mitigation would be located and whether the impacted habitat supports special-status species or other sensitive resources. Mitigation for Diegan coastal sage scrub, southern willow scrub, and open water shall not be adjusted below a 1:1 mitigation ratio consistent with the no-net-loss standard, unless otherwise conditioned in permits and/or discretionary approvals issued by the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW), as applicable. | District, District-approved qualified biologist | Per resource agency permit requirements (as applicable) or in a timely manner | District to confirm recordation in mitigation bank and note in project environmental documentation | | |

**Table 1**
**MMRP Summary**

<table>
<tr><th rowspan="2">Mitigation Measure</th><th rowspan="2">Responsible Party</th><th rowspan="2">Mitigation Timing</th><th rowspan="2">Monitoring and Reporting Procedure</th><th colspan="2">Verification of Compliance</th></tr>
<tr><th>Initials</th><th>Date</th></tr>
<tr><td colspan="6">BIOLOGICAL RESOURCES (cont.)</td></tr>
<tr><td>CFMP Bio-2A (cont.)<br>MITIGATION RATIOS FOR IMPACTS TO SENSITIVE NATURAL COMMUNITIES<br><table><tr><th>Sensitive Natural Community</th><th>Mitigation Ratio</th></tr><tr><td>Non-native grassland</td><td>0.5:1</td></tr><tr><td>Diegan coastal sage scrub</td><td>2:1</td></tr><tr><td>Southern willow scrub</td><td>3:1</td></tr><tr><td>Open water</td><td>1:1</td></tr></table>[1] Freshwater Marsh impacts are limited to the Lake Jennings shoreline, which is primarily inundated and characterized by partially submerged vegetation (Typha sp., Scirpus sp.) and as such will be mitigated in accordance with ratios assigned to Open Water.</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CFMP Bio-3B Regulatory Permitting. Potentially significant impacts to jurisdictional waters and/or wetlands would occur at Lake Jennings as a result of the installation of the Lake Jennings inlet and aeration blower components of the project; therefore, the District shall complete the following:<ul><li>Prepare and submit notification to the USACE for unavoidable impacts to Waters of the U.S. pursuant to the Clean Water Act Section 404;</li><li>Prepare and submit a Clean Water Act Section 401 Request for Water Quality Certification or State Porter-Cologne Water Quality Control Act Report of Waste Discharge to the RWQCB for unavoidable impacts to Waters of the State; and</li><li>Prepare and submit a CFG Code Section 1602 Notification of Lake or Streambed Alteration to the CDFW for unavoidable impacts to jurisdictional streambed and riparian habitat.</li></ul></td><td>District, District-approved qualified biologist</td><td>Per resource agency permit requirements (as applicable) or in a timely manner</td><td>District to confirm permitting was conducted</td><td></td><td></td></tr>
</table>

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-3B Regulatory Permitting (cont.)**<br>• The District shall mitigate impacts to jurisdictional waters and wetland in accordance with mitigation measure CFMP Bio-3C, unless otherwise specified in USACE, RWQCB, and/or CDFW regulatory permits. | | | | | |
| **CFMP Bio-3C Compensatory Mitigation for Impacts to Jurisdictional Resources**. The District shall implement compensatory mitigation at a minimum ratio of 1:1, which could be adjusted during permitting with the USACE, RWQCB, and CDFW, for the unavoidable loss of jurisdictional waters and wetlands, which would include one or a combination of the following measures:<br>• Purchase of preservation, establishment, re-establishment, rehabilitation and/or enhancement credits from a mitigation bank approved by the USACE and CDFW, such as the San Luis Rey Mitigation Bank or another approved mitigation bank in the region.<br>• Implement Permittee-responsible preservation, establishment, re-establishment, rehabilitation and/or enhancement at an on- or off-site location approved by the USACE, RWQCB, and/or CDFW, including preparation and implementation of a conceptual mitigation plan, habitat mitigation monitoring plan, restoration plan, and/or long-term management plan, unless otherwise specified by the USACE, RWQCB, and/or CDFW.<br>• Plans for restoration or revegetation should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation. | District, District-approved qualified biologist | Per resource agency permit requirements (as applicable) or in a timely manner | District to confirm compensatory mitigation was conducted | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **CFMP Bio-3C Compensatory Mitigation for Impacts to Jurisdictional Resources (cont.)**<br>• A conservation easement, restrictive covenant, or other protection shall be recorded over the mitigation area and the area shall be managed in perpetuity in accordance with the long-term management plan, unless otherwise specified by the USACE, RWQCB, and/or CDFW. | | | | | |
| **ECAWP Bio-1 Avoidance of Rare Plants.** Prior to initiating construction activities, the District shall require that the delicate clarkia and/or San Diego goldenstar locations depicted on Figure 8d and Figure 8l of the Biological Resources Technical Letter (Appendix C) are clearly shown on final construction plans. The District shall further require that the locations are demarcated in the field by a qualified biologist and protected-in-place through the installation of temporary construction fencing or alternative means that are approved by the qualified biologist. The qualified biologist shall monitor construction activities, as appropriate, to help ensure avoidance of the areas. A final compliance report shall be prepared by the qualified biologist and submitted to the District for record verifying that no impacts occurred to the species. Any inadvertent and unavoidable impacts shall be mitigated in accordance with mitigation measure CFMP Bio-1B from the CFMP PEIR. | District-approved qualified biologist, contractor | During design for depiction on plans<br>During construction for monitoring | Compliance report by District-approved qualified biologist to be provided to District | | |
| **ECAWP Bio-2 Pre-Construction Gnatcatcher Surveys.** If construction activities are planned to occur during the coastal California gnatcatcher breeding season (March 15 to September 15), then prior to initiating construction activities within 500 feet of off-site coastal California gnatcatcher locations depicted on Figures 8a, 8b, 8j, 8l, and 8m of Appendix C, the District shall retain a USFWS-permitted biologist to conduct pre-construction surveys to confirm the presence or absence of the species. The surveys shall begin a maximum of seven days prior to project construction, and one survey shall be conducted the day immediately prior to the initiation of work. If gnatcatchers are confirmed to be absent within 500 feet of planned construction areas, then no additional measures shall be required. If gnatcatchers are confirmed to be present, then the District shall implement mitigation measure ECAWP Bio-3. | District-approved USFWS permitted biologist | Within seven days prior to construction activities if during gnatcatcher breeding season | Documentation of survey to be provided to District | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **ECAWP Bio-3 Avoidance of Gnatcatcher Breeding Season.** If the results of pre-construction surveys from Mitigation Measure ECAWP Bio-2 determine the presence of coastal California gnatcatcher within 500 feet of planned construction areas, then construction activities at these locations shall be completed outside of the gnatcatcher breeding season (February 15 to August 31). If activities at these locations cannot avoid the gnatcatcher breeding season, then the District shall implement required monitoring pursuant to mitigation measures CFMP Bio-1H and CFMP Bio-1I.<br><br>If, after implementation of mitigation measures CFMP Bio-1H and CFMP Bio-1I, construction noise levels during the gnatcatcher breeding season cannot be reduced below a 60 dBA hourly average from the edge of occupied gnatcatcher habitat, then the District shall implement mitigation measure ECAWP Bio-4. | District-approved qualified biologist, contractor | During construction | District-approved qualified biologist to coordinate construction activities based on survey results developed as part of ECAWP Bio-2. | | |
| **ECAWP Bio-4 USFWS Consultation and Conservation Measures.** The District and/or federal action agency for the project shall consult with the USFWS regarding project-related adverse effects to the coastal California gnatcatcher and/or least Bell's vireo, as appropriate. At a minimum, the following conservation measures shall be implemented by the District, unless otherwise prescribed by the USFWS:<br><br>• Prepare and implement a USFWS-approved plan to avoid disturbing nesting gnatcatchers and/or vireos, including construction and implementation of noise attenuation (e.g., sound walls, berms, blankets, etc.), monitoring noise levels to ensure that they are less than 60 dBA, and nest monitoring;<br><br>• Retain USFWS-approved biological monitor to conduct contractor training, monitor construction activities, and oversee installation and inspection of temporary fencing and erosion control measures; halt work, if necessary, and confer with the USFWS to ensure the proper implementation of species and habitat protection measures; and submit monthly reports (including photographs of impact areas) via regular mail or email to the USFWS during monitoring. | District, District-approved qualified biologist | Prior to construction for consultation and development of plan<br><br>During construction for implementation of plan/ measures. | District to confirm measures were implemented. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **ECAWP Bio-5 Pre-construction Least Bell's Vireo Surveys.** If construction activities are planned to occur during the least Bell's vireo breeding season (March 15 to September 15), then prior to initiating construction activities within 500 feet of off-site vireo locations depicted on Figures 8a, 8b, and 8l of Appendix C, or in any project construction areas within 500 feet of least Bell's vireo critical habitat, the District shall retain a qualified biologist to conduct pre-construction surveys to confirm the presence or absence of the species. The surveys shall begin a maximum of seven days prior to project construction, and one survey shall be conducted the day immediately prior to the initiation of work. If vireos are confirmed to be absent within 500 feet of planned construction areas, then no additional measures shall be required. If vireo are confirmed to be present, then the District shall implement mitigation measure ECAWP Bio-6. | District-approved qualified biologist | Within seven days prior to construction activities if during gnatcatcher breeding season | Documentation of survey to be provided to District by District-approved qualified biologist. | | |
| **ECAWP Bio-6 Avoidance of Vireo Breeding Season**. If the results of pre-construction surveys from mitigation measure ECAWP Bio-5 determine the presence of least Bell's vireo within 500 feet of planned construction areas, then construction activities at these locations shall be completed outside of the vireo breeding season (March 15 to September 15). If activities at these locations cannot avoid the vireo breeding season, then the District shall implement required monitoring pursuant to mitigation measures CFMP Bio-1H and CFMP Bio-1I.<br><br>If, after implementation of mitigation measures CFMP Bio-1H and CFMP Bio-1I, construction noise levels during the vireo breeding season cannot be reduced below a 60 dBA hourly average from the edge of occupied vireo habitat, then the District shall implement mitigation measure ECAWP Bio-4. | District-approved qualified biologist, contractor | During construction | District-approved qualified biologist to coordinate construction activities based on survey results developed as part of ECAWP Bio-2. | | |
| **ECAWP Bio-7 Project-Level Compensatory Mitigation for Impacts to Sensitive Natural Communities.** The District shall implement compensatory mitigation for permanent impacts in accordance with the ratios from mitigation measure CFMP Bio-2A and through one or a combination of the following measures:<br><br>• Purchase of off-site conservation credits from a conservation bank in the region; | District, District-approved qualified biologist | Per resource agency permit requirements (as applicable) or in a timely manner | District to confirm compensatory mitigation was conducted. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **BIOLOGICAL RESOURCES (cont.)** | | | | | |
| **ECAWP Bio-7 Project-Level Compensatory Mitigation for Impacts to Sensitive Natural Communities (cont.)**<br>• Implementation of on- and/or off-site habitat preservation, creation, restoration, and/or enhancement, including preparation and implementation of a conceptual mitigation plan, habitat mitigation monitoring plan, restoration plan, and/or long-term management plan. The mitigation areas shall be of equivalent or superior function as determined in consultation with a qualified biologist.<br>The District shall restore or revegetate temporary impact areas at a 1:1 ratio through the preparation and implementation of a restoration plan, which shall include the following, as prepared by a qualified biologist or restoration specialist, at a minimum:<br>• Location of the restoration site;<br>• Plant species to be used, container sizes, and seeding rates;<br>• Schematic depicting the restoration area;<br>• Planting schedule;<br>• Description of the irrigation methodology;<br>• Measures to control exotic vegetation on site;<br>• Specific success criteria;<br>• Monitoring program;<br>• Contingency measures should the success criteria not be met; and<br>• Identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation. | | | | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **CULTURAL RESOURCES** | | | | | |
| **ECAWP Cul-1 Preservation of Historical Significance of the El Monte Tunnel of the San Diego Flume.** The portion of the AWP Pipeline through the El Monte Tunnel shall be designed in coordination with a qualified Historic Preservation Specialist and the State Historic Preservation Officer. Design measures following the Secretary of the Interior's Standards for the Treatment of Historic Properties shall be developed to avoid adverse impacts to the historical resource and preserve the character-defining features of the resource. Permanent impacts to the decorative exterior façades of the tunnel entrances shall be avoided and all measures and design options for the treatment of the resource shall be developed in accordance with the Secretary of the Interior's Standards for Rehabilitation, Restoration, or Reconstruction, as appropriate. | District-approved qualified Historic Preservation Specialist | During project design | District to confirm incorporation of measures on design plans | | |
| **ECAWP Cul-2 Construction Monitoring and Recovery of Cultural Resources.** During project construction activities for the project, the District's construction manager shall retain a qualified archaeologist that meets the standards identified in the District Native American Sacred Resources Policy. A Native American monitor that meets the standards identified in the District Native American Sacred Resources Policy shall also be retained. The archaeologist and the Native American monitor shall be present to monitor initial ground disturbance for the project for all open-cut trenching activities and excavations for the launching and receiving pits for trenchless construction methods within young (Holocene) alluvial deposits (see Figure 5 of Appendix D of the IS/MND). Monitoring of ground disturbing activities within District right-of-way, the Ray Stoyer WRF site, and the Operations Center site, which are listed as exemptions in the District's Native American Sacred Resources Policy, would not be required. If it is determined by the archaeologist and Native American monitor that past grading and other disturbances have removed soils with a reasonable potential for containing cultural material, monitoring can be discontinued. If cultural material is encountered, the archaeologist and the Native American monitor shall have the authority to temporarily halt or redirect grading and other ground-disturbing activity while the cultural material is documented and assessed. If cultural resources are encountered, the District shall comply with Section VI of the PDMWD Native American Sacred Resources Policy, AB 52, and State CEQA Guidelines section 15064.5, as applicable. | District construction manager, District-approved qualified archaeologist | During construction | Construction Manager to document that monitoring was conducted and recovery, if required, complies with applicable guidelines.<br>Report to be submitted to District after monitoring | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **CULTURAL RESOURCES (cont.)** | | | | | |
| **ECAWP Cul-2 Construction Monitoring and Recovery of Cultural Resources (cont.)**<br><br>If discovered cultural resources are potential historical resources, the District shall comply with Section VIII of the District Native American Sacred Resources Policy and State CEQA Guidelines section 15064.5, as applicable.<br><br>Recovered artifactual materials shall be cataloged and analyzed. The District shall comply with Section VI of the District Native American Sacred Resources Policy and State CEQA Guidelines section 15064.5, as applicable. A report shall be completed by the qualified archaeologist describing the methods and results of the monitoring and data recovery program. The report shall be submitted to the District for review and approval. Artifacts collected (if any) shall be curated with accompanying catalog to current professional repository standards and transferred to an appropriate curating facility within San Diego County. | | | | | |
| **CFMP Pal-1 Paleontological Resources Mitigation and Monitoring Plan.** A Paleontological Resources Mitigation and Monitoring Plan shall be prepared prior to construction of CFMP projects that could directly affect geologic formations with moderate or high paleontological resource sensitivity (Tertiary sedimentary rocks, as shown on Figure 4.6-1 of the PEIR). A qualified paleontologist shall be retained by the District to carry out and manage the plan. Fieldwork may be carried out by a qualified paleontological monitor working under the direction of the paleontologist. Components of the Paleontological Resources Mitigation and Monitoring Plan shall include, but not be limited to:<br><br>1. The paleontologist shall attend all pre-grading meetings to inform the grading and excavation contractors of the paleontological resource mitigation program and shall consult with them with respect to its implementation.<br><br>2. The paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of Moderate-to-High resource sensitivity formation to inspect cuts for contained fossils. | District-approved qualified paleontological monitor | Plan submitted to District for approval prior to construction<br><br>Monitoring to occur during construction | District to confirm a Paleontological Resources Mitigation and Monitoring Plan was prepared.<br><br>Contractor to confirm that monitoring was conducted and measures were implemented during construction. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **CULTURAL RESOURCES (cont.)** | | | | | |
| **CFMP Pal-1 Paleontological Resources Mitigation and Monitoring Plan (cont.)**<br>3. If fossils are discovered, the paleontologist or monitor shall recover them. In instances where recovery requires an extended salvage time, the paleontologist or monitor shall be allowed to temporarily direct, divert, or halt grading to allow recovery of fossil remains in a timely manner. Where deemed appropriate by the paleontologist or monitor, a screen-washing operation for small fossil remains shall be set up.<br>4. Recovered fossils, along with copies of pertinent field notes, photographs, and maps, shall be deposited (with the District's permission) in a scientific institution with paleontological collections. A final summary report that outlines the results of the mitigation program shall be completed. This report shall include discussion of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils. | | | Summary report, if necessary, submitted to District after monitoring. | | |
| **GEOLOGY / SOILS** | | | | | |
| **CFMP Geo-1 Conduct Site-specific Geotechnical Investigation**. A site-specific geotechnical investigation will be completed to identify site-specific criteria related to considerations such as grading, excavation, fill, and structure/facility design. All applicable results and recommendations from the geotechnical investigation will be incorporated into the associated individual project design and construction documents to address identified potential geologic and soil hazards, including but not necessarily limited to: (1) seismic hazards including ground rupture, ground acceleration (ground shaking), soil liquefaction (and related issues such as dynamic settlement and lateral spreading), landslides/slope instability, and seiche effects; and (2) non-seismic hazards including manufactured slope instability, subsidence/compressible soils, expansive or corrosive soils, and trench/excavation instability. The final project design and construction documents will also encompass applicable standard design and construction practices from established | District, District-approved qualified geologist | During project design | Results and/or measures to be incorporated into project design and construction documents as appropriate. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **GEOLOGY / SOILS (cont.)** | | | | | |
| **CFMP Geo-1 Conduct Site-specific Geotechnical Investigation (cont.)**<br><br>regulatory/industry sources including the CBC, IBC, CGS, Greenbook and District standards, as well as the results/recommendations of geotechnical review and field observations/testing to be conducted during project excavation, grading and construction activities (with all related requirements to be included in applicable engineering/design drawings and construction contract specifications). A summary of the types of remedial measures typically associated with identified potential seismic hazards, pursuant to applicable regulatory and industry standards, is provided below. The remedial measures identified/recommended as part of the described site-specific geotechnical investigation will take priority over the more general types of standard regulatory/industry measures provided herein.<br><br>• Ground Rupture: (1) Locate (or relocate) applicable facilities away from known active (or potentially active) faults and outside of associated CGS Earthquake Fault Zones; and (2) require appropriate (typically 50-foot) building exclusion buffers (setbacks) on either side of applicable fault traces.<br><br>• Ground Acceleration (Ground Shaking): (1) Incorporate applicable seismic loading factors (e.g., IBC/CBC/CGS criteria) into the design of facilities such as structures, foundations/slabs, pavement, pipelines, utilities, manufactured slopes, retaining walls and drainage facilities; (2) use remedial grading techniques where appropriate (e.g., removing/replacing and/or reconditioning unsuitable soils); and (3) use properly engineered fill per applicable industry/regulatory standards (e.g., IBC/CBC/CGS), including criteria such as appropriate fill composition, placement methodology, compaction levels, and moisture content.<br><br>• Liquefaction and Related Effects: (1) Remove unsuitable soils and replace with engineered fill (as previously described), per applicable regulatory/industry standards (e.g., IBC/CBC/CGS); (2) employ measures such as deep soil mixing (i.e., introducing cement to consolidate loose soils) or use of subsurface structures | | | | | |

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**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **GEOLOGY / SOILS (cont.)** | | | | | |
| **CFMP Geo-1 Conduct Site-specific Geotechnical Investigation (cont.)**<br>(e.g., stone columns or piles) to provide support (i.e., by extending structures into competent underlying units); (3) use appropriate surface drainage and/or subdrains in applicable areas to avoid or reduce near-surface saturation; and (4) design for potential settlement of liquefiable materials through means such as use of post-tensioned foundations and/or flexible couplings for utility connections.<br>• Landslides/Slope Instability: (1) Construct properly drained shear keys and/or replace susceptible deposits with manufactured buttress fills where appropriate; (2) employ applicable slope laybacks (i.e., shallower slopes) and/or structural setbacks; (3) incorporate structures such as retaining walls and stability fills where appropriate to provide support; (4) provide protective walls or other barriers in areas susceptible to landslides; and (5) implement proper slope drainage and landscaping where applicable per established regulatory/industry standards (e.g., IBC/CBC/CGS).<br>• Seiche Effects: Implement scour protection measures such as appropriate pipeline depths, and use of armoring (e.g., concrete or riprap covers) or other protection devices (e.g., barriers) for applicable projects that cross drainages and rivers.<br>• Manufactured Slope Instability: (1) Limit slope grades to 2:1 (horizontal to vertical) or other applicable ratios based on site-specific conditions and the results of slope stability analyses (if recommended as part of the geotechnical analyses); (2) employ similar strategies regarding slope laybacks, structure setbacks and support/protective structures as outlined above under the discussion of Landslides/Slope Instability; (3) provide appropriate short- and long-term drainage control, such as slope drains and/or brow ditches to avoid/minimize runoff on slopes; and (4) utilize native and/or drought-tolerant landscaping varieties, as well as "smart" irrigation systems (e.g., appropriate water schedules and rain/pressure-sensitive sensors/shutoff devices) to minimize irrigation and associated runoff. | | | | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **GEOLOGY / SOILS (cont.)** | | | | | |
| **CFMP Geo-1 Conduct Site-specific Geotechnical Investigation (cont.)**<br>• Subsidence/Compression: (1) Use standard efforts such as over-excavation and recompaction or replacement of unsuitable materials with engineered fill, and enhanced foundation design in applicable areas (e.g., post-tensioned or mat slab foundations); (2) use engineered fill, subdrains, surcharging (i.e., loading prior to construction to induce settlement) and/or settlement monitoring (e.g., through the use of settlement monuments) in appropriate areas; (3) implement groundwater withdrawal monitoring/restrictions per established legal/regulatory/industry standards (if applicable).<br>• Collapsible Soils: (1) Over-excavation and recompaction or replacement of unsuitable materials with engineered fill; (2) deep soil mixing, use of subsurface structures to provide support, and proper surface drainage/subdrains (as described above under Liquefaction); and (3) surcharging (as described above under Subsidence/ Compression).<br>• Expansive Soils: (1) Replace and/or mix expansive materials with non-expansive fill; and (2) cap expansive soils in place with an appropriate thickness of non-expansive fill per established regulatory/industry standards (e.g., IBC/CBC).<br>• Corrosive Soils: (1) Remove unsuitable deposits and replace with non-corrosive fill; (2) use corrosion-resistant construction materials (e.g., corrosion-resistant concrete and coated or non-metallic facilities); or (3) install cathodic protection devices (e.g., use of a more easily corroded “sacrificial metal” to serve as an anode and draw current away from the structure to be protected) per established regulatory/industry standards (e.g., IBC/CBC). | | | | | |

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| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **GEOLOGY / SOILS (cont.)** | | | | | |
| **CFMP Geo-1 Conduct Site-specific Geotechnical Investigation (cont.)**<br>• Trench/Excavation Instability: (1) Limit trench and other excavation depths and side slope grades to the minimum feasible levels; (2) provide shoring and/or other protective systems (e.g., benching and shielding) for applicable trenches/excavations, pursuant to associated regulatory standards (e.g., OSHA and Cal-OSHA); (3) restrict heavy equipment/vehicle access and material/soil stockpiles near trenches/ excavations; and (4) inspect trenches/excavations and related conditions/facilities at the start of each shift and after precipitation (or other water intrusion) events. | | | | | |
| **ECAWP Geo-1 Construction Best Management Practices.** The following best management practices (BMPs) will be implemented, as appropriate, during project construction to reduce potential for erosion soil loss, and/or sedimentation to a less than significant level:<br>• Sediment shall be retained on the site.<br>• Sediment basins, traps, or similar control measures shall be installed at the time of clearing and grading operations.<br>• Native vegetation is to be retained if possible, but if it must be removed, shall be done in such a way as to minimize erosive effects.<br>• Per the City of Santee Municipal Code Chapter 15, slopes shall be no steeper than 2:1 and fills shall be no steeper than 2:1.<br>• Earth or paved interceptors and diversions shall be installed at the top of cut or fill slopes where there is a potential for surface runoff.<br>• Temporary mulching, seeding, or other suitable stabilization measures shall be used to protect exposed critical areas during construction or other land disturbance. | Contractor | During construction | Contractor to provide District with documentation that construction BMPs were implemented during construction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **HAZARDS & HAZARDOUS MATERIALS** | | | | | |
| **CFMP Haz-1 Sewage Pump Station Safety Features.** Sewage pump stations shall incorporate standard safety features, including an emergency generator on the site in case of electrical failure, and sufficient sewage detainment capacity in the event of generator and/or pump mechanism failure to allow time for repair and/or emergency conveyance of the sewage. Portable emergency generators may be used for pump stations that cannot be equipped with an on-site generator. Each sewage pump station and treatment facility would implement a Sewer System Management Plan that includes contingency measures in the event of emergency leaks or spills. | District, contractor | During project design | District to confirm measures incorporated into project plans | | |
| **CFMP Haz-3 Fire Safety Plan.** To minimize the risk of losses resulting from wildfire, the following measures shall be implemented during project construction for the project:<br>• Construction within areas of dense foliage during dry conditions will be avoided, when feasible.<br>In cases where avoidance is not feasible, brush fire prevention and management practices will be incorporated. Specifics of the brush management program will be incorporated into project construction documents. | District, District-approved consultant | Plan to be completed during project design and implemented during construction | Contractor to implement practices during construction and District to confirm implementation. | | |
| **ECAWP Haz-1 Health and Safety Plan for Handling of Contaminated Soils.** Prior to any ground-disturbing activity related to pipeline installation within the District's Operations Yard or within 50 feet of a documented hazardous materials site in Mast Boulevard, the contractor shall develop a Community Health & Safety Plan and Soil Management Plan for the safe handling of contaminated soils, which shall be reviewed and approved by the San Diego County DEH. Typical remedial measures for contaminated soils may include efforts such as removal and proper disposal of contaminated materials, or on-site treatment and reuse, if applicable. The construction contract will require the general contractor or the subcontractor performing excavation work to have a California-issued Hazardous Substance Removal "HAZ" Certification. | Contractor | During construction and prior to ground-disturbing activity related to pipeline installation within the District's Operations Yard | Contractor to submit DEH approved plan to District; District to ensure plan is implemented during construction. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **HYDROLOGY / WATER QUALITY** | | | | | |
| **CFMP Hyd-1 Conduct Site-Specific Water Quality Investigation.** A site-specific water quality investigation will be completed prior to approval of final project design. All applicable results and recommendations from this investigation will be incorporated into the final project design documents to address identified potential long-term water quality issues related to conditions such as: anticipated and potential pollutants to be used, stored or generated on-site; the location and nature (e.g., impaired status) of on-site and downstream receiving waters; and project design features to avoid/address potential pollutant discharges. The final project design documents will also encompass standard design practices from sources including NPDES criteria and other applicable regulatory standards (with all related requirements to be included in engineering/design drawings and construction contract specifications). A summary of the types of BMPs typically associated with identified potential water quality concerns, pursuant to applicable regulatory and industry standards (as noted), is provided below. The BMPs identified/recommended as part of the described site-specific water quality investigation will take priority over the more general types of standard regulatory/industry measures listed below:<br>• Low Impact Development (LID)/Site Design BMPs: LID/site design BMPs are intended to avoid, minimize, and/or control post-development runoff, erosion potential, and pollutant generation to the maximum extent practicable by mimicking the natural hydrologic regime. The LID process employs design practices and techniques to effectively capture, filter, store, evaporate, detain, and infiltrate runoff close to its source through efforts such as: (1) minimizing developed/disturbed areas to the maximum extent feasible; (2) utilizing natural and/or unlined drainage features in on-site storm water systems; (3) disconnecting impervious surfaces to slow concentration times, and directing flows from impervious surfaces into landscaped or vegetated areas; and (4) using pervious surfaces in developed areas to the maximum extent feasible.<br>• Source Control BMPs: Source control BMPs are intended to avoid or minimize the introduction of pollutants into storm drains and natural drainages by reducing on-site pollutant generation and off-site pollutant transport through measures such as: | District, District-approved qualified hydrologist | During project design | Results and/or measures to be incorporated into project design and construction documents as appropriate | | |

**Table 1**
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| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **HYDROLOGY / WATER QUALITY (cont.)** | | | | | |
| **CFMP Hyd-1 Conduct Site-Specific Water Quality Investigation (cont.)**<br>• (1) installing "no dumping" stencils/tiles and/or signs with prohibitive language at applicable locations such as drainages and storm drain inlets to discourage illegal dumping; (2) designing trash storage areas to reduce litter/pollutant discharge through methods such as paving with impervious surfaces, installing screens or walls to prevent trash dispersal, and providing attached lids and/or roofs for trash containers; (3) designing site landscaping to maximize the retention of native vegetation and use of appropriate native, pest-resistant, and/or drought-tolerant varieties to reduce irrigation and pesticide application requirements; and (4) providing secondary containment (e.g., enclosed structures, walls, or berms) for applicable areas such as trash or hazardous material use/storage.<br>• Pollutant Control BMPs: Pollutant control BMPs are designed to remove pollutants from runoff to the maximum extent practicable through means such as filtering, treatment, or infiltration. Pollutant control BMPs are required to address applicable pollutants, and may include efforts such as: (1) providing water quality treatment and related facilities such as sediment basins, vegetated swales, infiltration basins, filtration devices, and velocity dissipators to treat appropriate runoff flows and reduce volumes prior to off-site discharge (per applicable regulatory requirements); (2) creating a construction spill contingency plan in accordance with DEH regulations and retaining a copy of the plan on- site by the construction manager; and (3) conducting regular inspection, maintenance, and as-needed repairs of pertinent facilities and structures. | | | | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **HYDROLOGY / WATER QUALITY (cont.)** | | | | | |
| **CFMP Hyd-2 Conduct Site-Specific Hydrologic Investigation.** A site-specific investigation shall be conducted for the project to determine the site-specific hydrological conditions, related potential impacts, and requirements. All applicable results and recommendations from this investigation shall be incorporated into the associated final design documents to address identified potential hydrologic concerns, including, but not necessarily limited to: drainage alteration, runoff rates/amounts, storm water management and hydromodification, and flood hazards. The final project design documents shall also encompass applicable standard design and construction practices from sources including NPDES (with related requirements to be included in applicable engineering/design drawings and/or construction contract specifications). A summary of the types of remedial measures typically associated with identified potential hydrologic concerns, pursuant to applicable regulatory and industry standards (as noted), is provided below. The remedial measures identified/recommended as part of the described site-specific hydrologic investigation will take priority over the more general types of standard regulatory/industry measures listed below.<br>• Drainage Alteration: (1) locate applicable facilities outside of surface drainage courses and drainage channels; (2) re-route surface drainage around applicable facilities, with such re-routing to be limited to the smallest area feasible and re-routed drainage to be directed back to the original drainage course at the closest feasible location (i.e., the closest location to the point of diversion); and (3) use drainage structures to convey flows within/through development areas and maintain existing drainage patterns, where appropriate and feasible.<br>• Runoff Rates/Amounts, Storm Water Management and Hydromodification: (1) minimize the installation of new impervious surfaces (e.g., by surfacing with pervious pavement, gravel or decomposed granite); (2) use flow regulation facilities (e.g., detention/retention basins) and velocity control structures (e.g., riprap dissipation aprons at drainage outlets), to maintain pre-development runoff rates and amounts for design storm events, if applicable; and (3) utilize additional and/or enlarged drainage facilities to ensure adequate on- and off-site storm drain system capacity, if applicable. | District, District-approved qualified hydrologist | During project design | Results and/or measures to be incorporated into project design and construction documents as appropriate | | |

**Table 1**
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| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **HYDROLOGY / WATER QUALITY (cont.)** | | | | | |
| **CFMP Hyd-2 Conduct Site-Specific Hydrologic Investigation (cont.)**<br>• Flood Hazards: (1) locate proposed facilities outside of mapped 100-year floodplain boundaries wherever feasible; (2) based on technical analyses such as Hydrologic Engineering Center-River Analysis System (HEC-RAS) studies, restrict facility locations to avoid adverse impacts related to impeding or redirecting flood waters; (3) based on HEC-RAS studies, use measures such as raised fill pads to elevate proposed structures above calculated flood levels, and/or utilize protection/ containment structures (e.g., berms, barriers or water-tight doors) to avoid flood damage; and (4) if Project-related activities/facilities result in applicable proposed changes to mapped FEMA floodplains, obtain an approved Conditional Letter of Map Revision (CLOMR) and/or Letter of Map Revision (LOMR) from FEMA, as applicable. | | | | | |
| **NOISE** | | | | | |
| **CFMP Noi-2 Site-Specific Acoustic Analysis for Ray Stoyer WRF and AWTP Facility Expansions.** Final design for the expansions of the Ray Stoyer WRF and AWTP facility shall demonstrate that sufficient noise attenuation is adequate to ensure that exterior noise levels generated from the Ray Stoyer WRF and AWTP facility shall not exceed the City of Santee one-hour exterior noise limit at the nearest residential property line of 55 dBA $L_{EQ}$ from 7:00 a.m. to 7:00 p.m., 50 dBA $L_{EQ}$ from 7:00 p.m. to 10:00 p.m., and 45 dBA $L_{EQ}$ from 10:00 p.m. to 7:00 a.m.<br>The District shall require the preparation of a final noise impact analysis by a qualified acoustical consultant as part of the facilities design submittal for the Ray Stoyer WRF and AWTP facility expansions. The final noise impact analysis shall demonstrate compliance with the applicable standards. If the analysis indicates an exceedance of noise ordinance limits from the expansions, the District shall install additional noise abatement sufficient to reduce noise to the limits of the applicable standards. These abatement measures could include noise abatement inside the facilities (e.g., higher Sound Transmission Class [STC] windows, new equipment with a lower sound power rating, or repositioning of equipment) or a noise barrier (e.g., fences, walls, or full enclosure of the facility/device). | District, District-approved qualified acoustical consultant | Requirement for analysis in design documents<br>Analysis to be conducted post construction | Qualified acoustical consultant to submit final noise impact analysis; District to install additional noise abatement as required | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **CFMP Noi-2 Site-Specific Acoustic Analysis for Ray Stoyer WRF and AWTP Facility Expansions (cont.)**<br><br>The specific additional features, if required, shall be determined by the qualified acoustical consultant based on the results of the final noise analysis. The features shall be installed, and their effectiveness in achieving applicable noise limits verified by a qualified acoustical consultant prior to operation of the facilities. | | | | | |
| **CFMP Noi-3 Construction Vibration Control Measures.** The following measures shall be implemented during construction of the project to minimize vibration effects to surrounding noise- and vibration-sensitive land uses:<br><br>• For any construction activities that include blasting, a qualified blasting consultant and geotechnical consultant shall prepare all required blasting plans and monitor all blasting activities in conformance with the standards of the State of California, Department of Mines.<br><br>• Noticing for blasting shall be provided between two and four weeks prior to construction to all residents or property owners within 600 feet of the alignment. The announcement shall state specifically where and when construction will occur in the area. If construction delays of more than seven days occur, an additional notice shall be made, either in person or by mail. | District, contractor | Vibration plan to be prepared during project design and implemented during construction; noticing shall occur within 2 to 4 weeks of construction activity | Contractor to provide District with documentation that plan was implemented during construction | | |
| **CFMP Noi-4 Construction Noise Limits**. Construction activities shall comply with the following local noise ordinances where feasible:<br><br>• **City of Santee:** A noise level limit of 75 dBA (8 hour $L_{EQ}$) between 7 a.m. to 7 p.m., and no construction on Sundays, major holidays, and between 7 p.m. to 7 a.m. Monday through Saturday.<br><br>• **City of San Diego:** A noise level limit of 75 dBA (12 hour $L_{EQ}$) between 7 a.m. to 7 p.m., and no construction on Sundays, major holidays, and between 7 p.m. to 7 a.m. Monday through Saturday. | Contractor | During construction | Contractor to provide District with documentation that noise control limits were achieved during construction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **CFMP Noi-4 Construction Noise Limits (cont.)**<br>• **County of San Diego:** A noise level limit of 75 dBA (8 hour $L_{EQ}$) between 7 a.m. to 7 p.m.<br>If noise levels fail to comply with the local ordinances, the District shall implement sound control methods that reduce the noise levels to the specified limits, including those listed below in measure CFMP Noi-5. | | | | | |
| **CFMP Noi-5 Construction Noise Reduction Measures**. The following measures shall be implemented during project construction:<br>• Heavy equipment shall be repaired at sites as far as practical from nearby residences.<br>• Construction equipment, including vehicles, generators and compressors, shall be maintained in proper operating condition and shall be equipped with manufacturers' standard noise control devices or better (e.g., mufflers, acoustical lagging, and/or engine enclosures).<br>• Electrical power shall be supplied from commercial power supply, wherever feasible, in order to avoid or minimize the use of engine-driven generators.<br>• Paging and alarm systems used by the District shall be installed so that noise emissions are directed away from, and shielded from, sensitive receptors. Personal paging systems and light alarms shall be used where feasible.<br>• Staging areas for construction equipment shall be located as far as practicable from residences.<br>• If lighted traffic control devices are to be located within 500 feet of residences, the devices shall be powered by batteries, solar power, or similar sources, and not by an internal combustion engine. | Contractor | During construction | Contractor to provide District with documentation that noise control measures were implemented during construction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **CFMP Noi-5 Construction Noise Reduction Measures (cont.)**<br>• The District or their construction contractors shall provide advance notice, between two and four weeks prior to construction, by mail to all residents or property owners within 300 feet of the construction work areas. The announcement shall state specifically where and when construction would occur in the area. If construction delays of more than 7 days occur, an additional notice shall be made, either in person or by mail.<br>• Nighttime construction work shall be avoided where possible. Should nighttime construction work be necessary in areas that may affect residential or hotel/motel land uses, the District's contractor shall ensure that nighttime construction noise levels do not exceed a one-hour limit of 70 dBA $L_{EQ}$ for more than five consecutive days. In addition to the above noise minimization measures, temporary sound barriers may be installed as appropriate between the construction work area and affected noise-sensitive land uses.<br>• The District shall identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise and other construction disturbance. The District shall also establish a program for receiving questions or complaints during construction and develop procedures for responding to callers. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with the information above. | | | | | |
| **ECAWP Noi-1 Ray Stoyer WRF Headworks Noise Reduction.** Noise levels from the Ray Stoyer WRF Headworks shall be reduced to not exceed 45 dBA $L_{EQ}$ at the nearest residential property lines and 60 dBA $L_{EQ}$ at the nearest sensitive habitat. Noise from the headworks emergency generator shall not exceed 55 dBA $L_{EQ}$ (daytime limit) at the nearest residential property line. | District, District-approved qualified acoustical consultant | During project design | District-approved noise consultant shall review design and ensure compliance with noise standards. District to ensure | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **ECAWP Noi-1 Ray Stoyer WRF Headworks Noise Reduction (cont.)**<br>Noise reduction for the Headworks shall be demonstrated on the design plans prior to construction. Designs shall be reviewed by a qualified noise consultant to ensure compatibility with the aforementioned noise standards.<br>Measures to reduce noise levels to below a level of significance may include, but are not limited to, the use of barriers, noise-attenuating windows and doors, noise absorptive material, equipment modifications, or a combination of these measures. Any emergency generators associated with the headworks shall comply with the 55 dBA $L_{EQ}$ daytime limit. This may be accomplished with a noise control barrier or enclosure. | | | that any appropriate measures are incorporated into final design plans. | | |
| **ECAWP Noi-2 SHERF Cogeneration Noise Reduction.** Noise levels from the SHERF cogeneration power generators shall be reduced to not exceed the nighttime limits of 45 dBA $L_{EQ}$ at the nearest residential property lines and 60 dBA $L_{EQ}$ at the nearest sensitive habitat.<br>Noise reduction for the SHERF components shall be demonstrated on the design plans prior to construction. Designs shall be reviewed by a qualified noise consultant to ensure compatibility with the aforementioned noise standards.<br>The SHERF's cogeneration power generators may include, but are not limited to, the following noise-control measures:<br>• In-line air silencers in intake and exhaust air ducts to meet the minimum criteria shown below in Table A, *SHERF Noise Control Features*.<br>• Forced air blowers for air movement.<br>• Engine exhaust silencer meeting the minimum standards of a Silex SE-12 shown below in Table A. | District, District-approved qualified acoustical consultant | During project design | District-approved noise consultant shall review design and ensure compliance with noise standards. | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **ECAWP Noi-2 SHERF Cogeneration Noise Reduction (cont.)**<br>• Exterior generator room door(s) shall have a minimum manufacturers STC rating of 55.<br>• Any exterior mounted silencers, interior silencers and any ducting between interior room walls and silencers may have an exterior steel shielding layer (18-gauge minimum thickness) with 2-inch (or thicker) noise absorbing inner layer.<br>• No doors or air openings in the walls facing the property lines; all doors and air openings would be in the walls perpendicular to the property lines.<br>• Building construction with 8-inch (or thicker) grouted concrete masonry unit (CMU) or poured cement.<br>Alternate mitigation may include relocating the cogeneration facilities further from the property line or by using updated noise source data at the time the final facilities layout is available, provided the noise levels are verified to be in compliance by a qualified acoustician. | | | | | |

**Table A**
**SHERF NOISE CONTROL FEATURES**

| Manufacturer | Model | Octave Band Center Frequency (Hertz) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 63 | 125 | 250 | 500 | 1,000 | 2,000 | 4,000 | 8,000 |
| Silence Requirements | IN-Line Duct | 34 | 52 | 51 | 51 | 55 | 55 | 49 | 51 |
| Silex | Eleminx SE-12 | 42 | 50 | 55 | 58 | 59.5 | 59.5 | 57 | 55 |
| Noise Control Door | STC 55 | 28 | 46 | 45 | 45 | 49 | 49 | 43 | 45 |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **ECAWP Noi-3 AWTP Noise Reduction.** Noise levels from the AWTP Facility shall be reduced to not exceed 45 dBA $L_{EQ}$ (nighttime limit) at the nearest residential property lines and 60 dBA $L_{EQ}$ at the nearest sensitive habitat.<br><br>Noise reduction for the AWTP Facility components shall be demonstrated on the design plans prior to construction. Designs shall be reviewed by a qualified noise consultant to ensure compatibility with the aforementioned noise standards.<br><br>Measures to reduce noise levels to below a level of significance may include, but are not limited to, the full enclosure of noise-generating AWTP Facility systems in a structure or building. If AWTP Facility systems are enclosed to ensure noise reduction, the following noise reduction measures may be implemented:<br>• Any openings facing to the north, south, and east have solid core steel doors with good seals, window systems with a manufacturers STC rating equal to or greater than 45.<br>• Any openings remain closed during the hours of 7:00 p.m. to 7:00 a.m.<br>• Any passive or active ventilation openings facing north, south, east, or on the roof provide noise reduction. Adequate noise reduction designs for ventilation may include acoustic louvers with the following minimum noise reduction values shown in Table B, *Acoustic Louver Octave Band Transmission Loss – AWTP Facility*. | District, District-approved qualified acoustical consultant | During project design | District-approved noise consultant shall review design and ensure compliance with noise standards. | | |

**Table 1**
**MMRP Summary**

<table>
<tr><th rowspan="2">Mitigation Measure</th><th rowspan="2">Responsible Party</th><th rowspan="2">Mitigation Timing</th><th rowspan="2">Monitoring and Reporting Procedure</th><th colspan="2">Verification of Compliance</th></tr>
<tr><th>Initials</th><th>Date</th></tr>
<tr><td colspan="6">NOISE (cont.)</td></tr>
<tr><td>ECAWP Noi-3 AWTP Noise Reduction (cont.)<br><br>Table B<br>ACOUSTIC LOUVER OCTAVE BAND TRANSMISSION LOSS - AWTP FACILITY<br><br><table><tr><th rowspan="2">Data Type</th><th colspan="8">Octave Band Center Frequency (Hertz)</th></tr><tr><th>63</th><th>125</th><th>250</th><th>500</th><th>1,000</th><th>2,000</th><th>4,000</th><th>8,000</th></tr><tr><td>12-inch ALV-LV-12 (Minimum Loss)</td><td>6</td><td>10</td><td>12</td><td>16</td><td>23</td><td>26</td><td>20</td><td>22</td></tr></table>Source: Vibro-Acoustics 2010 (Appendix F)</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>ECAWP Noi-4 EMG Pump Station Generator Noise Enclosure. The generator noise shall be reduced to 60 dBA $L_{EQ}$ or 3 dBA above ambient noise levels (whatever is higher) at the nearest sensitive habitat. This may be accomplished with a noise control barrier or enclosure.<br><br>Noise reduction for the EMG Pump Station generator shall be demonstrated on the design plans prior to construction. Designs shall be reviewed by a qualified noise consultant to ensure compatibility with the aforementioned noise standards.<br><br>To ensure noise reduction, attenuation may include, but is not limited to, the use of a noise absorptive material mounted to within two inches of the top of the enclosure walls. The material may be a minimum of two inches thick, with a minimum Noise Reduction Coefficient (NRC) of 0.9 by laboratory test rating.</td><td>District, District-approved qualified acoustical consultant</td><td>During project design</td><td>District-approved noise consultant shall review design and ensure compliance with noise standards.</td><td></td><td></td></tr>
<tr><td>ECAWP Noi-5 Trenching, Jack and Bore, and Horizontal Directional Drilling Noise Reduction Measures. For construction operations that would occur at movable locations along the pipeline alignment, the following setback distances would be necessary to maintain noise levels to within local standards.</td><td>Contractor</td><td>During construction</td><td>Contractor to provide District with documentation that noise control</td><td></td><td></td></tr>
</table>

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **ECAWP Noi-5 (cont.)**<br><br>For construction within the City of Santee or County of San Diego, construction noise shall not exceed 75 dBA $L_{EQ}$ (8 hour) as measured at the nearest NSLU.<br><br>During trenching activities in the City of Santee or County of San Diego, a noise barrier may be required. The height would be dependant on the proximity of construction to the nearest NSLU: 6-foot noise barrier within 49 feet of a NSLU, or an 8-foot noise barrier within 34 feet of a NSLU. The barrier shall be placed between the noise-generating equipment and NSLU.<br><br>During jack and bore construction in the City of Santee or County of San Diego, a noise barrier may be required. The height would be dependant on the proximity of construction to the nearest NSLU: a 6-foot noise barrier within 55 feet of a NSLU, an 8-foot noise barrier within 27 feet of a NSLU, or a 10-foot noise barrier within 15 feet of an NSLU. The barrier shall be placed between the noise-generating equipment and NSLU.<br><br>During horizontal directional drilling requiring the use of a generator and diesel engine in the City of Santee or County of San Diego, a noise barrier would be required. The height would be dependant on the proximity of construction to the nearest NSLU: a 6-foot noise barrier within 67 feet of a NSLU, an 8-foot noise barrier within 34 feet of a NSLU, or a 10-foot noise barrier within 19 feet of an NSLU. The barrier shall be placed between the noise-generating equipment and NSLU.<br><br>If a temporary barrier is used, all barriers shall be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per SF. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are | | | measures were implemented during construction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **NOISE (cont.)** | | | | | |
| **ECAWP Noi-5 (cont.)**<br>appropriately implemented to provide the required sound attenuation. The noise control barrier enclosures may be as an elongated "U" shape, with the elongated sides parallel to the pipeline. | | | | | |
| **ECAWP Noi-6 Rock Crushing Noise Reduction Measures**. If on-site use of a rock crusher is required, it shall be located more than 500 feet from the nearest residence. If located within this distance, a temporary sound barrier shall be placed around the rock crusher which shields nearby residences. The barrier should stand at least as tall as the highest part of the crusher, at a minimum of eight feet. | Contractor | During construction | Contractor to provide District with documentation that noise control measures were implemented during construction | | |
| **ECAWP Noi-7 Lake Jennings Construction Traffic Plan. I**f construction traffic is required to be routed via Bass Road or Bass Drive around Lake Jennings to the site of the proposed water feature near Half Moon Cove, the District shall implement a construction traffic plan, in coordination with Helix Water District, to minimize disturbance to noise-sensitive recreational users and nearby residents. This may be accomplished through the incorporation of measures including, but not limited to: the restriction of haul trips per hour such that construction traffic does not increase hourly average ambient noise levels by 3 dBA $L_{EQ}$ or more; restricting trips to mid-day hours to minimize campground visitors' and nearby residents' sleep disturbance; or restricting construction activity to a season and/or day when the campground is not at peak use. | District-approved Consultant (construction traffic plan), contractor (implementation of construction traffic plan measures) | Construction traffic plan to be prepared during project design and implemented during construction | Contractor to provide District with documentation that plan was implemented during construction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **TRANSPORTATION/TRAFFIC** | | | | | |
| **ECAWP Tra-1 Traffic Management Plan.** Prior to construction, the applicant shall prepare a comprehensive Traffic Management Plan (TMP) for the proposed project. The TMP shall be prepared in accordance with all applicable requirements of the City and County encroachment permits and applicable City and County plans, ordinances, and policies. The applicants shall submit the TMP to cities of San Diego and Santee and County of San Diego for review, comment, and approval. The TMP may include, but not be limited to, provisions for the following:<br>• Scheduling the timing and duration of work to avoid the peak commuter hours of 7:00-9:00 am and 4:00-6:00 pm;<br>• Scheduling of daytime work on Mast Boulevard that would require lane closures will be limited to the hours between 8:30 a.m. and 3:30 p.m.<br>• Limiting construction work at the following intersections to Monday through Thursday nights between the hours of 9:00 p.m. and 5:00 a.m.:<br>o Mast Boulevard and Carlton Hills Boulevard<br>o Mast Boulevard and Cuyamaca Street<br>o Mast Boulevard and Magnolia Avenue;<br>• Restricting construction activities around El Capitan High School during drop-off and pick-up times;<br>• Coordinating with public transit providers (where necessary);<br>• Providing off-site construction worker parking areas and shuttles for workers to/from the job site;<br>• Implementing standard safety practices, including installing appropriate barriers between work zones and transportation facilities, placement of appropriate signage, and use of traffic control devices; | District-approved Consultant (TMP), contractor (implementation of TMP measures) | TMP to be prepared during project design and implemented during construction | Contractor to provide District with a copy of TMP and encroachment/excavation permits indicating compliance from agency of jurisdiction | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **TRANSPORTATION / TRAFFIC (cont.)** | | | | | |
| **ECAWP Tra-1 Traffic Management Plan (cont.)**<br>• Coordinating with the jurisdictions prior to construction to determine specific traffic handling layouts;<br>• Protecting traffic by using flaggers, warning signs, lights, and barricades to guide vehicles through or around construction zones;<br>• Restoring roadway capacity to the extent feasible during hours when construction activities are not occurring, which could include the use of road plates or temporary paving;<br>• Cleaning and restoring roadways upon completion of work;<br>• Repair of asphalt and other road damage (e.g. curb and gutter damage) caused by construction vehicles. Documentation of original conditions and repair shall be submitted to the lead agencies for review and verification within 30 days of repair completion;<br>• Avoiding roads operating at LOS E or worse through the use of alternate traffic routes and construction personnel carpools and/or shuttles;<br>• Limiting the length of open trenches to the length allowed by County and City encroachment permits;<br>• Implementing construction schedules and techniques that minimize roadway closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities;<br>• Detours for cyclists and pedestrians when bike lanes or sidewalks must be closed;<br>• Installing steel plates over open trenches in inactive construction areas to maintain existing bicycle and pedestrian access after construction hours; | | | | | |

**Table 1**
**MMRP Summary**

| Mitigation Measure | Responsible Party | Mitigation Timing | Monitoring and Reporting Procedure | Verification of Compliance | |
|---|---|---|---|---|---|
| | | | | Initials | Date |
| **TRANSPORTATION / TRAFFIC (cont.)** | | | | | |
| **ECAWP Tra-1 Traffic Management Plan (cont.)**<br>• Implementing construction phasing or techniques to maintain access through intersections where no alternative routes are available;<br>• Coordinate with local schools prior to construction within close proximity of school property to ensure entryways are not blocked during peak drop off and pick up times;<br>• Enforcing speed limits of construction vehicles on all roads, including unpaved access roads within District property;<br>• Notify emergency response providers of road closures at least one week prior to closures and include the location, date, time and duration of the closure; and<br>• Abiding by encroachment permit conditions, which shall supersede conflicting provisions in the TMP. | | | | | |

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