BUREAU OF RECLAMATION

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Draft Environmental Assessment

Monterey One Water's Expanded Pure Water Monterey Groundwater Replenishment Project

California – Great Basin Region

U.S. Department of the Interior
Interior Region 10 California-Great Basin
Bureau of Reclamation

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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 Photo: Pure Water Monterey Advanced Water Purification Facility (2021)

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AFY	Acre-Feet Per Year
APE	Area of Potential Effects
AWPF	Advanced Water Purification Facility
Base PWM Project	Pure Water Monterey Groundwater Replenishment Project
BGS	Below Ground Surface
BMPs	Best Management Practices
CAA	Clean Air Act
CalAm's	California American Water Company
CARB	California Air Resources Board
CCR	California Code of Regulations
CDP	Coastal Development Permit
CECs	Constituents of Emerging Concern
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CPUC	California Public Utilities Commission
CSIP	Castroville Seawater Intrusion Project
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
CY	Cubic Yards
Department	U.S. Department of the Interior
DIW	Deep Injection Well
EA	Environmental Assessment
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
EQ Tank	Equalization Tank
ESA	Endangered Species Act
Expanded Project	Expanded Pure Water Monterey Groundwater Replenishment Project
FONSI	Finding of No Significant Impact
GRRP	Groundwater Replenishment Reuse Project
IPR	Indirect Potable Reuse
ITAs	additional Indian Trust Assets
IW	Injection Well
IWF	Injection Well Facilities
LOX	Liquid Oxygen
M1W	Monterey One Water
MBARD	Monterey Bay Air Resources District
MBNMS	Monterey Bay National Marine Sanctuary
MCWD	Marina Coast Water District
MCWRA	Monterey County Water Resources Agency
MF	Microfiltration
MGD	million gallons per day
MMPA	Marine Mammal Protection Act
MMRP	Mitigation Monitoring and Reporting Program
MMRPs	Mitigation Monitoring and Reporting Programs
MPWMD	Monterey Peninsula Water Management District

Acronym/Abbreviation	Definition
MRP	Monitoring and Reporting Program
MW	Monitoring Well
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Basin Air Basin
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHRP	National Register of Historic Places
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
ONMS	Office of National Marine Sanctuaries
OOP	Operation Optimization Plan
P.L.	Public Law
PG&E	Pacific Gas and Electric
PEA	Programmatic Environmental Assessment
Product Water	Advanced Purified Recycled Water
PWM	Pure Water Monterey
Reclamation	Bureau of Reclamation
RO	reverse osmosis
RTP	Regional Treatment Plant
SCADA	supervisory control and data acquisition
SEIR	Supplemental EIR
SHPO	State Historic Preservation Officer
SMART	Sustain and Manage America's Resources for Tomorrow
State Water Board	State Water Resources Control Board
Title XVI	Title XVI Water Reclamation and Reuse Program
TTF	Tertiary Treatment Facility
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish & Wildlife Service
UV AOP	Ultraviolet light-based Advanced Oxidation Process
VFDs	variable frequency drives
VZW	Vadose Zone Well
WDR/WRR	Waste Discharge Requirement/Water Recycling Requirement
WIFIA	Water Infrastructure Finance and Innovation Act
WIIN	Water Infrastructure Improvements for the Nation Act
WOTUS	waters of the United States

1 Introduction

1.1 Background

The U.S. Department of the Interior's (Department) WaterSMART (Sustain and Manage America's Resources for Tomorrow) Program provides a framework for Federal leadership and assistance to stretch and secure water supplies for future generations in support of the Department's priorities. Through WaterSMART, the Bureau of Reclamation (Reclamation) leverages Federal and non-Federal funding to support stakeholder efforts to stretch scarce water supplies and avoid conflicts over water.

Through the Title XVI Water Reclamation and Reuse Program (Title XVI), authorized by Public Law (P.L.) 102-575 in 1992, Reclamation provides financial and technical assistance to local water agencies for the planning, design, and construction of water reclamation and reuse projects. The Water Infrastructure Improvements for the Nation Act (WIIN), P.L. 114-322, was enacted in December 2016 to address water resources infrastructure that is critical to the Nation's economic growth, health, and competitiveness. Section 4009(c) of Subtitle J of WIIN includes amendments to Reclamation's Title XVI Program. Prior to the enactment of WIIN, funding for water recycling project construction could only be provided for congressionally authorized Title XVI projects. The WIIN amendments allow new water recycling projects to be eligible to receive Federal funding.

Reclamation provides up to 25 percent of the total cost of planning, design, and/or construction, up to $30 million, to local water agencies through the Title XVI WaterSMART Grant Program (WSGP) for water reclamation and reuse projects. These projects develop and supplement urban and irrigation water supplies through water reuse – thereby improving efficiency, providing flexibility during water shortages, and diversifying the water supply. As the federal funding agency, Reclamation is responsible for compliance with federal laws and regulations, including the National Environmental Policy Act (NEPA) of 1969 (42 United States Code section 4321–5327), the Council on Environmental Quality regulations implementing NEPA (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Department of the Interior regulations (43 CFR Part 46).

1.1.1 Pure Water Monterey Groundwater Replenishment Project ("Base PWM Project")

The approved and constructed Pure Water Monterey Groundwater Replenishment Project ("Base PWM Project") was designed to create a reliable supply of water for northern Monterey County by replenishing the Seaside Groundwater Basin with 3,500 acre-feet per year (AFY) of purified recycled water ("product water"). The Base PWM Project replaces a portion of California American Water Company (CalAm's) water supply as required by State Water

Resources Control Board (State Water Board) orders and provides up to 600 AFY of purified recycled water to Marina Coast Water District (MCWD) for urban landscape irrigation. To meet these objectives, Monterey One Water (M1W) constructed a 5.0 million gallon per day (MGD) Advanced Water Purification Facility (AWPF), source water diversion facilities to supplement influent to the Regional Treatment Plant (RTP), and injection well facilities (IWF) in the Seaside Groundwater Basin. The Marina Coast Water District, M1W's partner, constructed a transmission main pipeline to convey product water (purified recycled water) from the AWPF to the IWF. A total of four deep injection wells (DIW), two vadose zone wells (VZW), and seven monitoring wells (MWs) have been constructed as part of the Base PWM Project.

In normal and wet years, approximately up to 4,500 to 4,750 AFY of additional recycled water supply could be created for agricultural irrigation in the existing Castroville Seawater Intrusion Project (CSIP) area.[1] See **Figure 1** for an overview map of the Base PWM Project components that have been implemented by M1W and their partner agencies.

When considering the Base PWM Project for Title XVI WaterSmart Grant funding, Reclamation prepared an environmental assessment (EA) and issued a Finding of No Significant Impact (FONSI) in June 2017 in compliance with NEPA requirements. Reclamation relied upon consultation by the U.S. Environmental Protection Agency (EPA) and the State Water Board, with additional Indian Trust Assets (ITAs) consultation as required by federal statutes, to adopt their FONSI. In January 2021, Reclamation awarded M1W $19,558,178 for Base PWM Project costs. The Base PWM Project has since been constructed and began operation in February 2020.

[1] Monterey County Water Resources Agency (MCWRA) is currently not participating in funding capital costs, operation and maintenance of the Base PWM Project new source waters facilities. Those projects include the following: Blanco Drain Pump Station and Pipeline, Reclamation Ditch Diversion, the Salinas Storm Water Diversion, and the Pond 3 Pump Station (all constructed and partially funded by a State Storm Water Grant from the State Water Board). Two additional source water facilities are the Lake El Estero Diversion (currently in design with funding available) and the Salinas Valley Reclamation Plant Winter Modifications (which has not been designed nor funded).

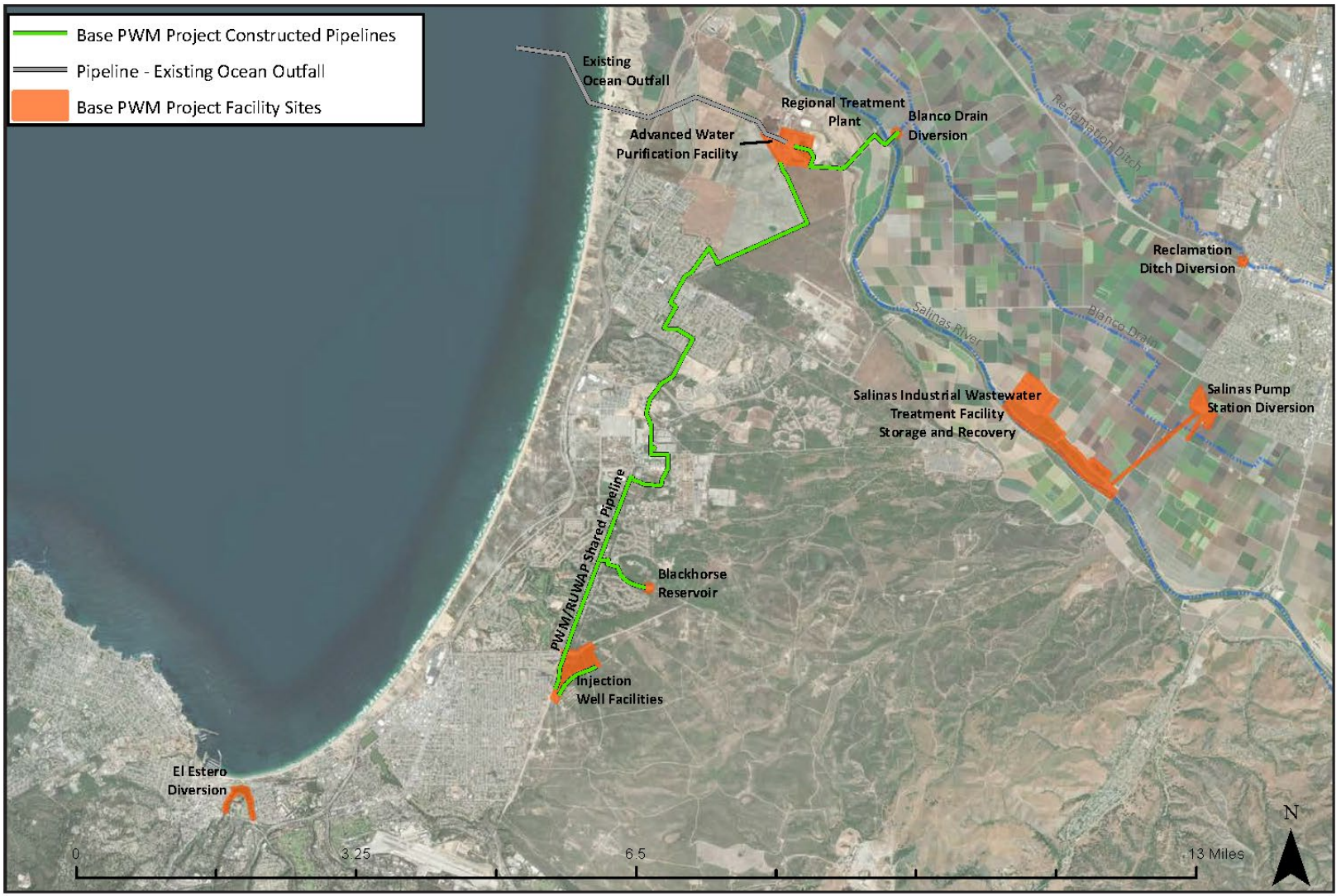

Figure 1. Base PWM Project Overview

1.1.2 Expanded Pure Water Monterey Groundwater Replenishment Project ("Expanded Project")

The Expanded Pure Water Monterey Groundwater Replenishment Project ("Expanded Project") will expand the AWPF capacity from 5 MGD to 7.6 MGD peak capacity and increase recharge of the Seaside Groundwater Basin by an additional 2,250 acre-feet per year (AFY). Reclamation is proposing to provide additional WaterSMART grant funding for the Expanded Project for the construction of modifications to the AWPF (new and modified equipment in the existing AWPF)[2] and Injection Well Facilities (IWF)[3] necessary to accommodate increased production and injection of purified recycled water anticipated to begin in March 2023. Current Expanded Project implementation status is described in Section 2.2.3 of this document. Detailed Expanded Project component descriptions are found in Section 2.2.2. See also **Figure 2** for an overview map depicting Expanded Project components for which Reclamation would partially fund by the Proposed Action.

On August 18, 2022, Reclamation notified M1W of the anticipated award of $10,316,822 from FY 2022 appropriations. Pending the satisfaction of all federal requirements, this grant would provide M1W with a portion of the funding required for the Expanded Project. The Proposed Action considered in this EA entails Reclamation providing additional funding through a Title XVI/WIIN grant for construction of the Expanded Project. Further information on the Proposed Action is provided in Section 2.2.

[2] The modifications to the AWPF are called the "Advanced Water Purification Facility Expansion Project" in engineering design documents.

[3] The modifications to the IWF are referred to as "Injection Well Facilities Phase 4 Project" in engineering design documents (which include new conveyance pipelines).

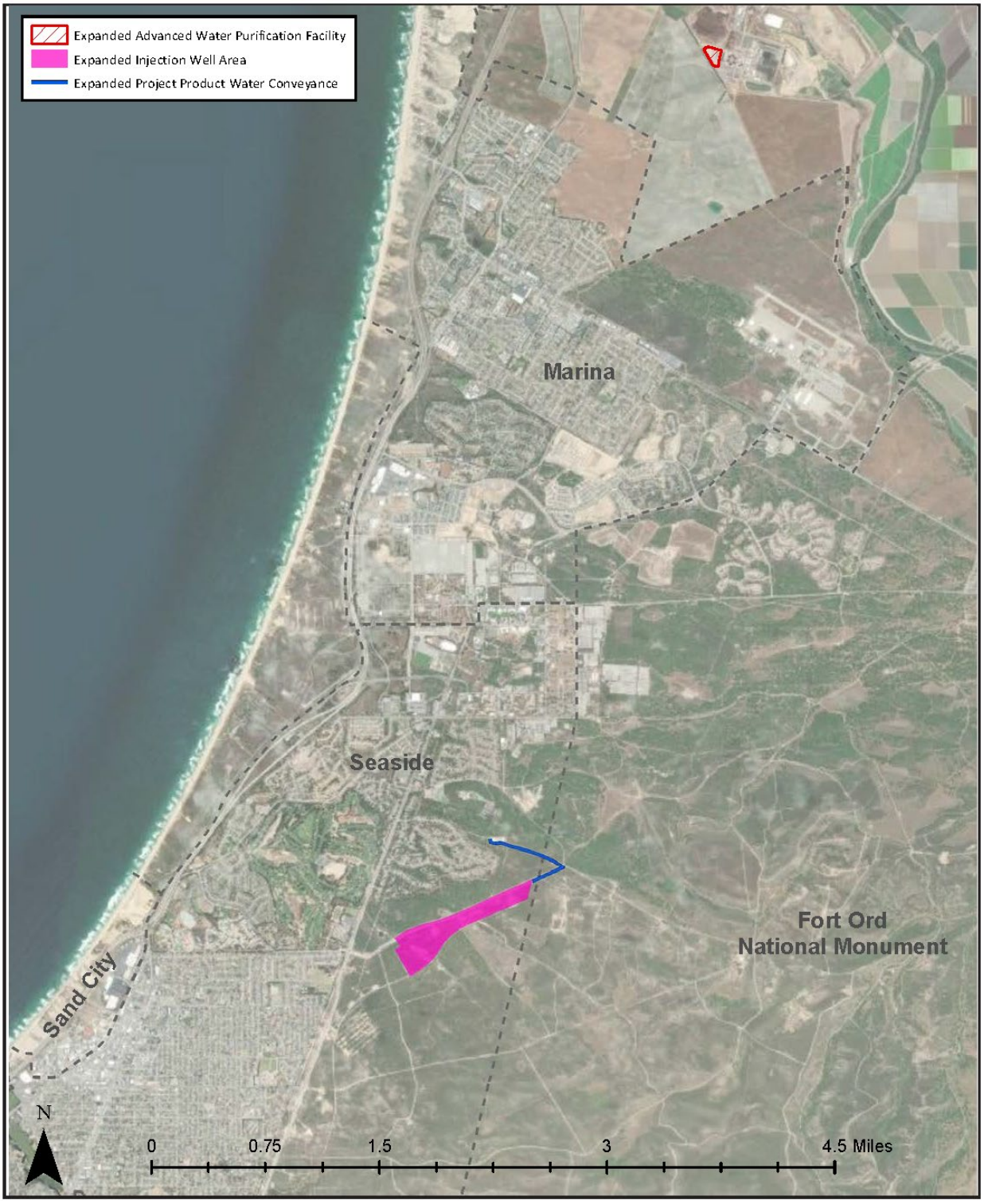

Figure 2. Expanded Project Overview

1.2 Previous Environmental Documents

1.2.1 Pure Water Monterey Groundwater Replenishment Project ("Base PWM Project")

The Base Project was partially funded by a Clean Water State Revolving Fund (CWSRF) loan from the State Water Board. The State Water Board Division of Financial Assistance staff issued its California Environmental Quality Act (CEQA)-plus determination after federal consultation was complete in April 2017. The EPA took the federal lead to consult with the United States Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NMFS). By way of delegation of authority (a Memorandum of Agreement), the State Water Board took the federal lead to consult with the State Historic Preservation Office (SHPO). The State Water Board completed a Cross-Cutters Environmental Checklist documenting the results of their consultation and federal compliance determination processes and filed a Notice of Determination with the State Office of Planning and Research.

As previously discussed, Reclamation also prepared an EA and issued a FONSI for the Base Project when considering it for Title XVI WaterSmart Grant funding. In that process, Reclamation relied upon consultation by the EPA and the State Water Board, with additional ITAs consultation as required by federal statutes, to adopt their FONSI. The Office of National Marine Sanctuaries (ONMS) and the Monterey Bay National Marine Sanctuary (MBNMS) office also prepared an EA and adopted a FONSI in April 2019 to comply with NEPA for their authorization of M1W's National Pollutant Discharge Elimination System (NPDES) permit amendment in December 2018. As part of their NEPA process, ONMS/MBNMS consulted with the required agencies overseeing compliance with federal environmental statutes and regulations (i.e., USFWS, NMFS, SHPO, and the California Coastal Commission).

Previous environmental review performed for the Base Project under CEQA (State Clearinghouse Number 2013051094) is summarized below:

- October 8, 2015 – M1W Board of Directors approved the Base Project and certified the Environmental Impact Report (EIR).

- June 2016 – Addendum No. 1 to the EIR was approved by Monterey Peninsula Water Management District (MPWMD) considering environmental effects of CalAm's Distribution Permit amendment authorizing construction of the Hilby Pump Station and Monterey Pipeline.

- February 2017 – Addendum No. 2 to the EIR was prepared and approved by MPWMD considering environmental effects of another amendment to CalAm's distribution water system permit for the Monterey pipeline realignment in the City of Monterey.

- October 30, 2017 – Addendum No. 3 to the EIR was prepared and approved by the M1W Board of Directors considering modifications to increase operational capacity of the AWPF from 4 to 5 MGD, joint use of a conveyance pipeline, and delivery of 600 AFY of purified water to MCWD.

1.2.2 Expanded Pure Water Monterey Groundwater Replenishment Project ("Expanded Project")

Below summarizes the environmental review performed for the Expanded Project:

- November 7, 2019 – M1W completes the Draft Supplemental EIR (SEIR) and conducts a properly-noticed public review period which was ultimately extended to January 31, 2020.

- April 13, 2020 – M1W completes and publishes the Final SEIR and publishes and conducts all required notifications of its availability. A public hearing was conducted on April 27, 2020 at which hearing, the M1W Board did not act to certify the SEIR and to approve the project.

- April 26, 2021 – M1W Board certified the Supplemental EIR (SEIR) as amended by an environmental memorandum related to impacts, mitigation measures and alternatives of modifications to the injection well facilities, and approved the Expanded Project

- November 29, 2021 – M1W adopted Addendum No. 4 and approved modifications to the Expanded Injection Well Area to include an additional replacement well and relocating a well and backflush basin.

- October 13, 2022 – EPA completed NEPA review of the Expanded Project for their own proposed action to approve a Water Infrastructure Finance and Innovation Act of 2014 (WIFIA) loan agreement. EPA completed consultation with SHPO under the National Historic Preservation Act and with USFWS under the federal Endangered Species Act (ESA) and issued a FONSI under the WIFIA Programmatic EA on October 13, 2022.

Reclamation performed an independent review of the above-referenced CEQA documents and determined that they would provide sufficient information to analyze effects of the Proposed Action as required by the NEPA. The EIR, SEIR, and their record, are incorporated by reference (M1W, Pure Water Monterey Website, November 2022) This EA provides additional discussion of potential effects on ITAs, Indian sacred sites, environmental justice, air quality conformity, threatened and endangered species, cultural resources, and the Clean Water Act. This EA also includes an evaluation of potential cumulative effects of the Project (Base + Expanded Project) operations.

1.3 Need for the Proposed Action

The primary objective of the Proposed Action is to provide funding to the Expanded Project. The Expanded Project objectives are to reduce discharges of secondary effluent to Monterey Bay and to replenish the Seaside Groundwater Basin with 2,250 AFY of additional purified recycled water to replace CalAm's use of existing water sources. To accomplish these primary objectives, the Proposed Modifications would need to meet the following objectives:

- Be capable of commencing operation, or of being substantially complete, by the end of 2021 or as necessary to meet CalAm's replacement water needs;

- Be cost-effective such that the Expanded Project would be capable of supplying reasonably-priced water; and

- Be capable of complying with applicable water quality regulations intended to protect public health.

2 Alternatives Including the Proposed Action

2.1 No Action

Under the No Action Alternative, Reclamation would not award grant funding for a portion of the costs for M1W to construct the Expanded Project. The No Action Alternative assumes M1W would proceed with the Expanded Project absent Reclamation funding. Often a No Action Alternative involves a project not being implemented, and therefore, the existing physical conditions at the project site do not change. However, in this case, M1W will proceed with the Expanded Project whether or not Reclamation takes the federal action of providing grant funding.

2.2 Proposed Action

Under the Proposed Action Alternative, Reclamation would award grant funding for a portion of the costs for M1W to construct the Expanded Project. This section presents a summary of the Expanded Project including an overview of the proposed action area and environmental setting (**Section 2.2.1**), component descriptions (**Section 2.2**), construction (**Section 2.2.3**) and operations and maintenance (**Section 2.2.4**).

2.2.1 Proposed Action Area

The Expanded Project facilities are located within unincorporated areas of Monterey County and within the city of Seaside as detailed in **Figure 2**. Section 4.12 of the SEIR provides an overview of the land uses in the Project area and surrounding properties. In addition, Section 4.2.2.1 of the Base PWM Project Final EIR describes the visual character of the project area using landscape units to classify the visual character of each individual project component site. See **Table 1.** In addition, the Expanded Project is not located on any tribal or federal land as documented in the Historic Property Survey and Finding of Effect Report (Basin Research Associates, December 2001).

Table 1. Land Use Designations and Visual Sensitivity Conditions

	AWPF	IWF & Conveyance
Location Description	Within the footprint of the existing AWPF constructed as part of the Base PWM Project.	Northeast of the Base PWM Project IWF, south of Eucalyptus and east of General Jim Moore Boulevard
Landscape Unit	Urban and developed	Coastal Scrub
Visual Quality	Low	Moderate
Affected Viewers & Exposure Conditions	Low	Moderate
Visual Sensitivity	Low	Moderate
Jurisdiction	Unincorporated Monterey County	City of Seaside and Monterey County
Designation	Public/Quasi-Public	Low Density Single Family Residential
Applicable Plans	2010 Monterey County General Plan, Monterey Peninsula Area Land Use Plan, Monterey County Zoning Ordinance	2003 Seaside General Plan, City of Seaside Zoning Ordinance, Fort Ord Reuse Plan

Treatment Facilities

The AWPF that will be modified by the Expanded Project is located in the northwest corner of the larger RTP site, identified as being within an Urban and Developed landscape unit due to existing structures and development, although the surrounding area is generally located in the Agricultural landscape unit. The site is characterized by large scale public utility/industrial-looking tanks and structures. The 2010 Monterey County General Plan classifies this site as Public/Quasi-Public. The area adjacent to the AWPF contains industrial-type wastewater and solid waste management equipment and facilities similar to the Expanded Project facilities, including the regional landfill, leased land on which composting and other industrial-type operations occur, and row crops to the west and south.

Conveyance Facilities

Expanded Project conveyance system modifications are primarily within the Urban and Developed landscape unit, except for the northernmost portion, which would be constructed within an existing dirt road and a portion of the alignment located near the area of the Expanded IWF Area. Although the northern portion of the alignment is located within an existing disturbed area, the area immediately surrounding the existing dirt road is within the Coastal Scrub landscape unit. Similarly, the southern portion would also be located within the Coastal Scrub landscape unit. The remaining portion of the alignment located within the right of way of the existing paved portions of Eucalyptus Road is within the Urban and Developed landscape unit. In the 2010 Monterey County General Plan, specifically the Fort Ord Master Plan, the sites adjacent to the roadway and driveway locations of the Product Water Conveyance Pipeline are designated at Low Density Residential and School/University. In the 2003 City of Seaside General Plan, the sites adjacent to the roadway locations of the Product Water Conveyance Pipeline are designated as Medium Density Residential.

Injection Well Facilities

The Expanded IWF Area site is located within the Coastal Scrub landscape unit in the City of Seaside. The Expanded IWF Area has historically been disturbed by former military training operations and environmental remediation activities. The Expanded IWF Area is designated as Low-Density Single Family Residential in the 2003 Seaside General Plan, although the surrounding area is currently open space.

2.2.2 Expanded Project Overview

The Expanded Project would increase the AWPF peak capacity from 5.0 MGD to 7.6 MGD and increase recharge of the Seaside Groundwater Basin by an additional 2,250 AFY (for an average annual yield of 5,750 AFY, Base + Expanded Project). The following section provides an overview of each Expanded Project component. Additional detail is provided in **Appendix A**.

Treatment Facilities

To facilitate increased production capacity at the AWPF, the Expanded Project would include installation of additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances within the 3.5-acre existing building area. In addition, the existing Product Water Pump Station at the RTP would need to be upgraded, including adding one duty pump and associated piping and valves, and one VFD and associated electrical instrumentation to the existing wet well and electrical cabinet, in order to efficiently convey the higher flowrates of water produced at the Expanded AWPF through the Product Water Conveyance Pipeline to the Expanded IWF Area and Blackhorse Reservoir. See **Figure 3** and **Table 2** and refer to Section 2.6.2 of the SEIR for additional detail regarding changes to the AWPF to increase production capacity. All ground disturbance and construction of structures occurred during construction of the Base PWM Project in 2018 to 2019. Existing concrete areas, and building/canopy construction, including the maximum depth and heights of construction and permanent facilities, are not being modified for the Expanded Project.

Table 2. AWPF Modifications Summary

AWPF Process Area	**Modification**
Source Water Pump Station	• One (1) duty source water pump and associated piping and valves
Ozone System	• One (1) liquid oxygen storage tank • One (1) standby liquid oxygen vaporizer • Two (2) ozone injection skids • One ozone autostrainers
Membrane Filtration System	• One (1) duty membrane filtration feed pump • One (1) duty membrane filtration unit
Reverse Osmosis System	• One (1) duty reverse osmosis transfer pump • One (1) duty reverse osmosis feed pump • One (1) large (2.02 MGD) reverse osmosis train • One (1) dry chemical mixing and metering system • One (1) brine hydraulic control structure
Ultraviolet Light Advanced Oxidation Process System	• Two (2) duty ultraviolet light reactors
Post-treatment Stabilization System	• One (1) new decarbonator, replacing existing
Waste Collection System	• One (1) duty waste transfer pump
Product Water Pump Station	• Replacement of up to two (2) of the existing pump impellers • Addition of one (1) duty product water pump and motor
For all of the above systems	• Process mechanical including (VFDs for pumps), structural bracing, electrical and instrumentation

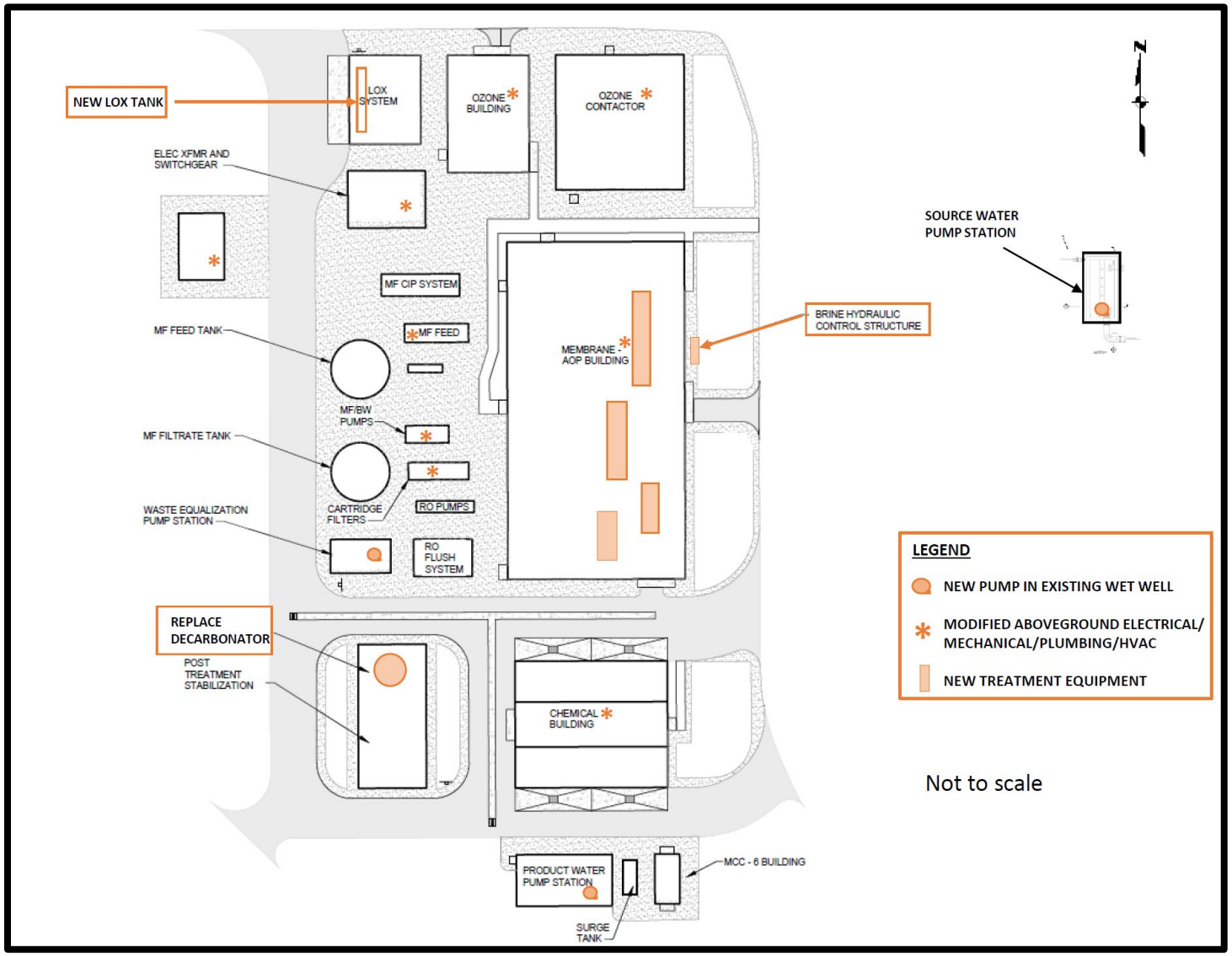

Figure 3. Advanced Water Purification Facility Expansion Site Plan

Conveyance Facilities

To accommodate the increased product water yield and deliver it to the Expanded IWF Area, the Expanded Project would include construction of new a Product Water Conveyance Pipeline extending from the existing Blackhorse Reservoir to the Expanded IWF Area (see **Figure 4**).[4] The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road which is closed to vehicles but frequently used by recreational users. In total, the pipeline would be a maximum of 30-inches in diameter and approximately 1 mile to the first Injection Well (at Well Site #5) with an additional 2,000 feet from Well Site #5 to Well Site #7.[5]

An additional 2,000 feet of 14-inch diameter pipeline for backflushing wells also be located along the same alignment as the product water pipeline between Well Site #6 and Well Site #7, where the backflush basin would be located. The purified water pipeline would continue to and past Well Site #7 and would terminate at Well Site #1 to increase the flexibility of the system to carry water at the pressure needed at all IWs. The total length of this pipeline would be 2.3 miles.

Injection Well Facilities

A minimum of 90% of the Expanded Project yield would be injected into the confined Santa Margarita Aquifer of the Seaside Groundwater Basin. The Expanded Project includes an expansion of the area of temporary and permanent IWF, in an area referred to as the Expanded IWF Area (See **Figure 4**), including the installation of:

- Two (2) new DIWs, one each at Well Site #6 and #7, drilled to a maximum depth of 1,200 feet below ground surface (bgs).[6]

- One (1) new monitoring well would be installed within the paved right-of-way of Eucalyptus Road if, required by the State Water board, Division of Drinking Water. The MW would not require any above ground infrastructure aside from an approximate 12-inch diameter manhole cover and would extend as far as 1,200 bgs with a diameter of 24 inches.

- One (1) 4.0 ac-ft capacity backflush/percolation basin, and associated facilities including a flow meter, a backflush pump and 400-hp motor, an electrical cabinet, and monitoring and a supervisory control and data acquisition (SCADA) system equipment.

[4] The engineering design for this component, the "Injection Well Facilities, Phase 4," includes the new product water conveyance pipeline within the same bid package as the new injection well facilities,

[5] No injection well facilities are proposed at Well Site #5 as part of the Expanded PWM Project. It was identified in conceptual design and environmental review as a potential future well site.

[6] The Expanded IWF Area would contain up to three well sites, numbered #5 through #7 (named from northeast to southwest). Two new DIW would be constructed and operated one each at Well Sites #6 and #7. Well Site #5 may be the site of another well in the future; however, that well is not currently proposed nor are any new vadose zone wells proposed.

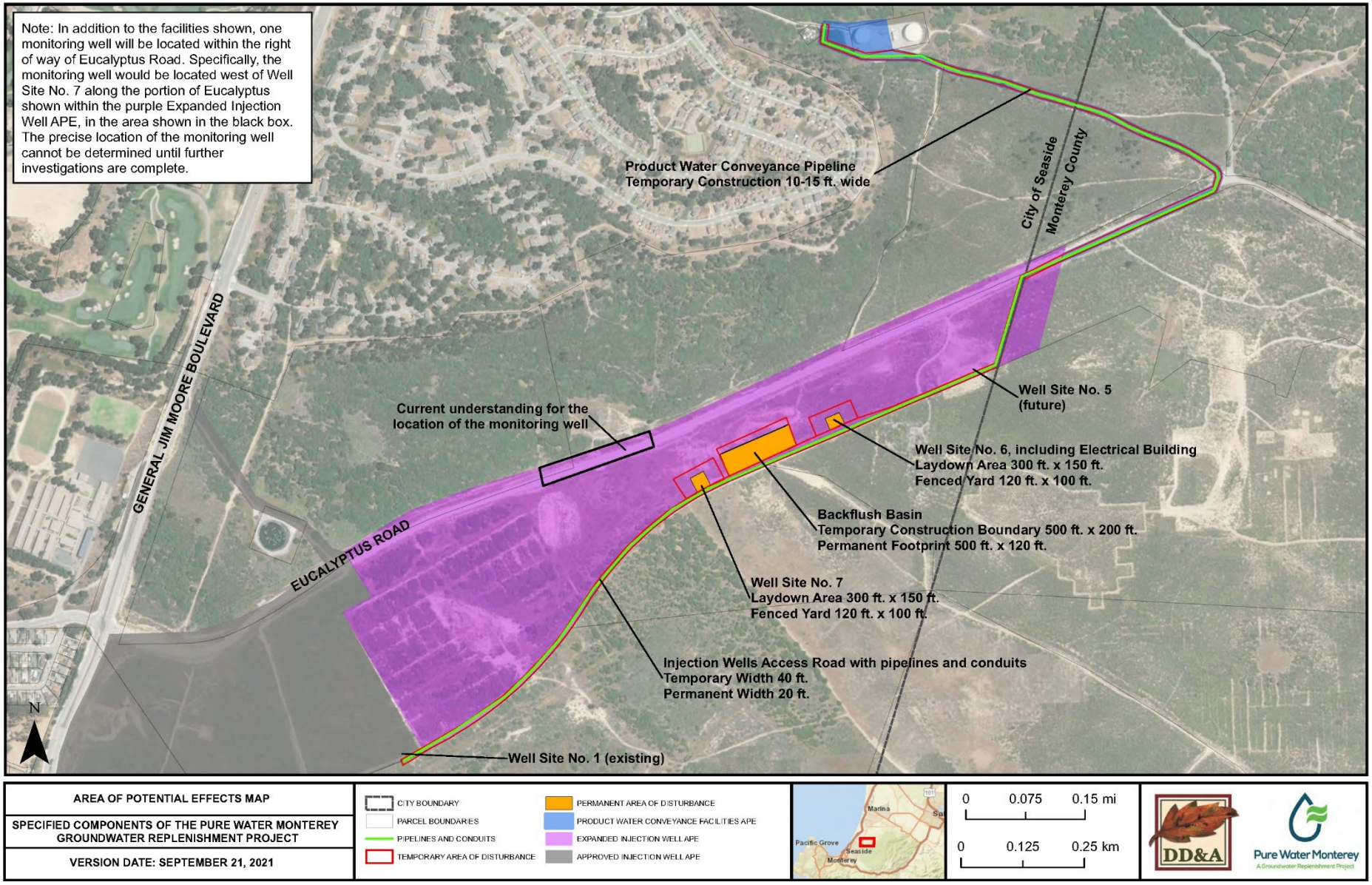

Figure 4. Expanded Project – Conveyance and Injection Well Facilities

- Two (2) new, small electrical buildings (one at each, Well Sites #6 and #7).

- A backflush basin for percolation water into the vadose zone, divided into two parts and enclosed by a fence, would be constructed between Well Sites #6 and #7.

- Electrical power supply/transformer, variable frequency drives (VFDs), and motor control buildings for PG&E power supply at each Well Site. In addition to incidental power requirements (instrumentation and monitoring equipment, site lighting and fencing.), major power supply and two VFDs would enable backflush of each well separately or both concurrently.

2.2.3 Project Construction

This section provides an overview of the construction process. The precise construction methods and schedule for all Expanded Project components have yet to be determined but work is anticipated to follow the broad methods outlined in the following sections. Construction assumptions are outlined in **Table 3**.

Treatment Facilities

The Expanded Project would expand the capacity of the AWPF from 5.0 MGD to 7.6 MGD requiring installation of additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances within the 3.5-acre existing building area, as summarized in Section 2.2.1 and **Table 2**. No new ground disturbance nor changes to the AWPF buildings or overhanging canopies are proposed as part of the Project. All ground disturbance and construction of structures occurred during Base PWM Project construction. Ground disturbance, concrete work and building/canopy construction, including the depth and heights of construction and permanent facilities are not being modified for the Expanded Project.

Construction activities would include cutting, laying, and welding pipelines and pipe connections; pouring concrete footings for attaching equipment to existing foundations (no new foundations), tanks, and other support equipment; installing piping, pumps, storage tanks, and electrical equipment; and testing and commissioning facilities. Construction equipment would include concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, and generators. Construction of the modifications would include equipment and materials delivery and installation, without any grading, earthmoving, paving, and only internal building structure modifications. Mechanical components of the ozone pretreatment, membrane filtration systems, reverse osmosis, advanced oxidation, and post-treatment facilities would be prefabricated and delivered to the site for installation within existing building footprints.

Conveyance Facilities

Conveyance facility modifications would include construction of a new conveyance pipeline and appurtenances extending from the existing Blackhorse Reservoir to an Expanded Injection Well Area. The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road. Construction activities within roadways would be restricted to the right-of-way approved by the applicable agency for public right-of-way and property owner for private roads. All roadways disturbed during pipeline installation would be restored. Generally, trench spoils would be temporarily stockpiled within the construction easement, then backfilled into the trench after pipeline installation. For the Product Water Conveyance Pipeline, construction would be performed at an anticipated installation rate of 250 feet per day within roadway rights-of-way and at a rate of up to 400 feet per day in undeveloped areas. The Expanded Project construction area is underlain by sandy soils that may require a laid-back trench cross-section due to considerations such as duration of construction, efficiency, and safety. Therefore, most linear facilities (conveyance pipelines) would be installed using conventional open-trench construction techniques. However, trenchless technologies such as boring and jacking, micro-tunneling, or horizontal directional drilling may be used where open-cut trenching is not feasible or desirable.

The construction sequence for open trench pipeline installation would typically include clearing and grading the ground surface along the pipeline alignment; excavating the trench; shoring, if required; preparing and installing pipeline sections; installing vaults, manhole risers, manifolds, and other pipeline components; backfilling the trench with non-expansive fills; restoring preconstruction contours; and revegetating or paving the pipeline alignments, as appropriate. A conventional backhoe, excavator, or other mechanized equipment would be used to excavate trenches. The typical trench would be six feet wide and up to 10 feet deep; however, vaults, manhole risers, and other pipeline components could require wider excavations up to 25 feet wide and up to 10 feet deep. It is anticipated that the maximum depth for pipelines will be approximately 10 feet deep for trenching and 25 feet deep for entry and exit pits within areas that plan to use trenchless pipeline installation. Other disturbance may be up to 8 feet deep for underground electrical, piping, access driveways, and equipment pads. Work crews would install trench boxes or shoring or would lay back and bench the slopes to stabilize the pipeline trenches and prevent the walls from collapsing during construction. After excavating the trenches, the contractor would line the trench with pipe bedding (sand or other appropriate material shaped to support the pipeline). Construction workers would then place pipe sections (and pipeline components, where applicable) into the trench, connect the sections together by welding or other applicable joining methods as trenching proceeds, and then backfill the trench.

Work crews would install trench boxes or shoring or would lay back and bench the slopes to stabilize the pipeline trenches and prevent the walls from collapsing during construction. After excavating the trenches, the contractor would line the trench with pipe bedding (sand or other appropriate material shaped to support the pipeline). Construction workers would then place

pipe sections (and pipeline components, where applicable) into the trench, connect the sections together by welding or other applicable joining methods as trenching proceeds, and then backfill the trench. Most pipeline segments would have four to five feet of cover. Open-trench construction would generally proceed at a rate of about 150 to 250 feet per day. Steel plates would be placed over trenches to maintain access during construction.

Injection Well Facilities

Expanded Project modifications to the IWF are summarized in **Section 2.2.2.3**. Earthmoving activities would be performed using heavy construction equipment such as bulldozers, backhoes, cranes, and graders. Pre-construction surveys for sensitive and listed species would be conducted in all suitable habitat proposed for construction, ground disturbance, or staging. See **Section 3** for further information, and **Appendix B, Appendix C,** and **Appendix D** for a summary of impacts of the Expanded Project and adopted Mitigation Monitoring and Reporting Programs (MMRPs).

Well Installation: Well installation typically follows a two-step process: 1) drilling and logging, and installation; 2) testing and equipping. The DIW would be drilled with rotary drilling methods. The method would be customized to minimize borehole impacts from drilling fluids and may incorporate air rotary methods or specialized drilling fluids (such as polymers). A 24-inch diameter borehole would be drilled. Cuttings from the borehole would be logged by a California Certified Hydrogeologist. Open-hole geophysical logging would also be conducted. Spoils will be spread on-site. A temporary diesel pump (up to 500-hp) would be used for eight-hours at each well to develop and test the well after construction.

Both constant discharge and constant injection testing would be completed in the Injection Well following well drilling. Constant rate tests would be preceded by step tests, as appropriate, to identify preferred rates for each test. Flowmeter surveys would be conducted following pumping and injection testing to identify water movement within the wellbore. Depending on the objectives of the test, both static and dynamic flow testing may be recommended. At the end of the constant rate discharge test, a water quality sample would be collected to confirm local groundwater quality. Constituents targeted for analysis would be based on compliance with the applicable State Water Board, Division of Drinking Water regulations and recommendations contained in the Engineering Report prepared for well construction, as well as ambient groundwater quality.

Backflush Pipeline and Percolation Basin: Percolation basins are required for disposal of periodic well backflushing cycles, and for disposal of well development and testing water for new or rehabilitated wells. Percolation basins located within the wellfield recharge to the vadose zone. The new percolation basin would have a capacity of 4.0 acre-feet, requiring the excavation of approximately 6,500 cubic yards of material and placing it on the adjacent slopes or using it to create level well sites. The total area of soil disturbance is approximately 1.5-acres. Temporary disturbance would measure 500 feet by 200 feet with a maximum depth of 20 feet; permanent

component footprint is 500 feet by 120 feet and up to 10 feet deep. A 20-foot-tall light post for safety lighting would be located near the backflush basin, and an 8 foot tall metal fence would be built around the basin.

To construct the backflush pipeline and basin, the contractor would excavate pipe trenches, retain the spoilage on site, import and install bedding material, and lay pipe, backfill & compact trench. Estimated construction time for this component is approximately four months. The temporary construction area along the alignment of the 14-inch diameter backflush water pipeline would be approximately 25 to 50 feet wide, for its approximate 2,000-foot length. Hence, the ground surface disturbance area would be approximately 2.5 acres. The construction area width is to provide space for a backhoe, trucks for hauling excess soil material and imported bedding material. The depth of the pipeline trench would be approximately five feet to allow for bedding of the pipe and about three to four feet of cover material.

Electrical and Mechanical Equipment: A main electrical power supply/transformer and motor control building would be built at each new injection well site for PG&E power supply. In addition to incidental power requirements (instrumentation and monitoring equipment, site lighting, etc.), major power supply would be required to drive one pump motor at a time for backflushing the deep wells. The following activities would be required to construct the pump motor control and electrical conveyance facilities: (1) excavation of up to 12-feet deep to level the sites and create a foundation for structures, spoilage handling, import and install bedding material, building foundation, trench, place concrete, backfill & compact trench, finish concrete floor of electrical building; (2) install exterior electrical control cabinets on paved areas at the new injection well sites; and (3) for electrical buildings, construct block walls, doors, louvers, roof and appurtenances, then interior finishes, lighting and HVAC; and electrical equipment and wiring. See **Figure 5**.

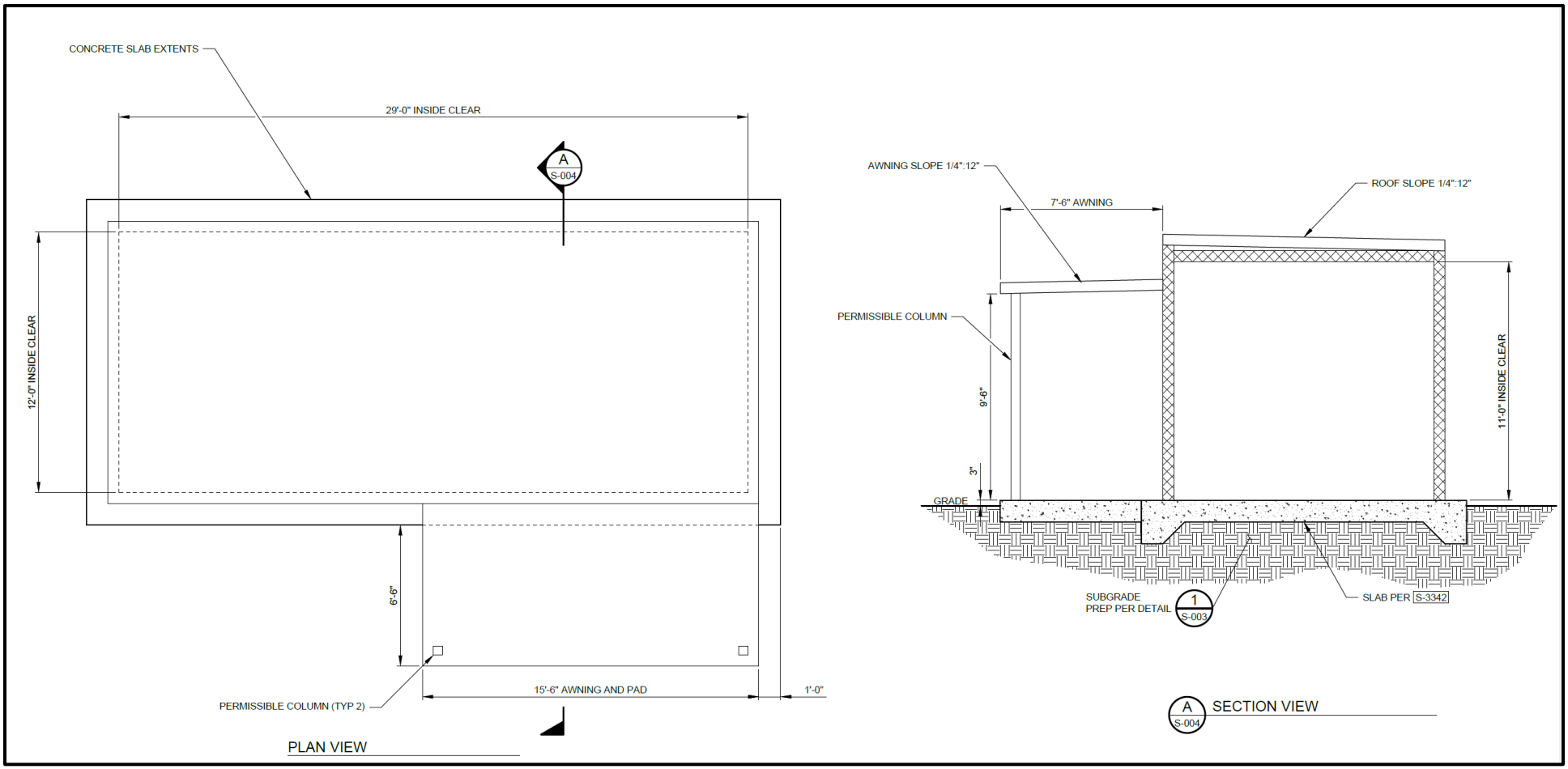

Figure 5. Electrical and Pump Motor Control Building

The construction period for these facilities is approximately 6 months. The temporary construction area would be approximately 25 to 50 feet wide within the alignment of the 14-inch diameter backflush water pipeline. There would be no additional surface disturbance for construction of electrical conduits beyond that for the 14-inch backflush pipeline. Construction activities would include installation of a buried electrical power conduit and instrumentation conduits, all of which would be underground and encased in a concrete ductbank, which would run in parallel and near the 14-inch backflush pipeline. The depth of the ductbank trench would be approximately 4.5 to 5 feet to allow for about 3 feet of cover material. The electrical control building that would house the electrical and instrumentation transmission equipment would be approximately 16 feet by 24 feet. Its foundation construction would be slab-on-grade; hence, excavation would be only about 3 feet deep. Construction surface area would be about 600 square feet.

Construction Timing

Construction timing is contingent on a variety of factors, most principally California Public Utilities Commission (CPUC) approval of the amended Water Purchase Agreement between M1W, MPWMD, and CalAm. Provided that milestone is achieved by November 2022, M1W anticipates construction to begin in Early 2023 with first delivery of Expanded Project water in early 2025. Key milestones include:

- Feasibility, Environmental Review, and Expanded Project Approval: 2019 – 2021 – Complete
- Permitting and Design: 2020 – Present
- Construction: 2023–2025 – Not Yet Started
- Expanded Project Start Up and Water Delivery: 2025

Expanded Project construction would last approximately 24 months, with some activities occurring concurrently. Construction is anticipated to begin in summer of 2023 and be substantially completed by 2025. General work hours are assumed to be between 7:00 AM and 8:00 PM, Monday through Saturday, except for the AWPF shutdowns and injection well drilling operations, which may require 24 hour/day, 7 days/week construction with up to 4 daily work shifts. A majority of construction would occur during normal working hours; weekdays between the hours of 8 a.m. and 5 p.m., and possibly on Saturdays between the hours of 9 a.m. and 5 p.m. All Project components would include daily arrival and departure of construction work crews; trucks hauling equipment and materials to the work sites; hauling of excavated spoils from the site; and importing fill to the site. See **Table 3**.

Table 3. Construction Assumptions for Expanded Project

Project Component	Construction Boundary Length (feet)	Construction Boundary Width (feet)	Permanent Component Footprint Length (Feet)	Permanent Component Footprint Width (Feet)	Permanent Component Footprint Max Height (Feet)	Permanent Component Footprint Max Depth (Feet)	Estimated Construction Equipment (Qty)	Depth of Excavation/ Quantity of Material Import & Export (Cu-Yd)	Disturbance Area (Acres)	Worker Trips (Daily)	Estimated Construction Duration (Months)
AWPF											
AWPF	No additional ground disturbance proposed.						See **Appendix E**.	No additional ground disturbance proposed.	No additional ground disturbance proposed.	4 (aver.) 14 (peak)	24
Product Water Conveyance											
Blackhorse Reservoir to Well Site #5**	5,280	10-15	5,280	<10	0	10	See **Appendix E**	19,000	1.2	10 (peak)	*
Injection Well Facilities											
Well site #6 facilities incl.: one DIW, MCC building & transformer	300	150	130	100	15	1,200	See **Appendix E**	40,000 6,500	3.6	4 (aver.) 15 (peak)	24
Well site #7 facilities including: one DIW, MCC building, and transformer	300	150	100	100	15	1,200					
Backflush Basin (light post & outlet pipe are aboveground)	500	200	500	120	20	10					
One monitoring well (no permanent aboveground facilities)	100	100	3	3	0	1,200					
Access roads to IWs, incl. underground pipelines listed separately, & electrical	8,400	40	8,400	20	0	10					
Purified water and backflush pipelines, plus electrical conduit from Wells Site #5 to Well Site #1**	4,600	10-15	4,600	<6	0	90					
Electrical conduit in General Jim Moore Blvd. &, if needed, Eucalyptus Rd.	560	10	560	3	0	6					
Backflushing pipelines	1,000	10-15	1,000	<6	0	10					

NOTES FOR TABLE 3: * Conveyance pipeline will be constructed as part of the Injection Well Facilities Phase 4 Project

** For manhole risers and valve vaults, excavation pits will have a maximum depth of 10-feet and up to a 25-feet by 25-feet area of excavation. Up to 2,400 ft of purified water pipeline on the injection well site will be installed with horizontal directional drilling (HDD). The segment is between Well Site #1 and Well Site #5. The pipe will be installed to a maximum depth of 90 ft below ground. Horizontal drilling requires excavation of a pit on either end of the pipe alignment that measures up to 20 feet wide and 50 feet long (sloping from up to 8 feet deep to the existing grade at the far end).

Staging Areas

All construction and staging areas at the AWPF would be within the existing 3.5-acre site. Staging areas would also be set up along conveyance pipeline alignments and construction equipment and materials would be staged to facilitate the movement of materials, equipment, and construction crews. Staging areas would not be located in sensitive areas such as riparian areas or critical habitat for protected species and would be selected to minimize hauling distances. To the extent feasible, parking for construction and worker vehicles would be accommodated within the construction work areas and on adjacent roadways.

In addition to excavation and grading at the injection well and backflush sites, clearing and grubbing may occur in staging areas with a depth up to six inches of potential disturbance during placement and movement of personnel and heavy equipment. Construction equipment and materials associated with pipeline installation would be stored along pipeline alignments and/or at nearby designated staging areas.

Construction Spoil and Trip Generation

Expanded Project implementation would generate construction debris (excess soil, rock, construction material, and debris) that would be disposed of at the regional landfill. The SEIR estimated that overall, the Expanded Project would generate approximately 100,000 cubic yards of construction debris. See **Section 3** for mitigation measures adopted to minimize construction waste. Worker trips and component-by-component quantity of construction debris generated are presented in **Table 3**.

Construction-Related Water Requirements

As with the Base PWM Project, the Expanded Project would not necessitate new or expanded water supplies to accommodate temporary construction demand associated with Expanded Project components. Contractors prefer local sources of water to fill their water trucks; therefore, for construction of Expanded Injection Well Facilities and Conveyance Pipelines, groundwater from nearby water supply wells or sources of recycled water would be used; however, the water would be allowed to percolate onsite after its use for construction purposes and, therefore, a majority of it would be returned to the groundwater basin. Portable toilets would be installed at the IWF construction site for construction workers, which would not require use of groundwater. The amount of construction water used at any individual construction site is estimated to be a onetime use of approximately 50 AF total, or about 1.1 AF per acre of ground disturbance.

2.2.4 Facility Maintenance

The Expanded Project is an expansion of an existing, approved Groundwater Replenishment Reuse Project (GRRP). As defined by the California Code of Regulations (CCR) Section 60301.390, a GRRP is "a project involving the planned use of recycled municipal wastewater that is operated for the purpose of replenishing a groundwater basin designated in the Water Quality Control Plan for use as a source of municipal and domestic water supply." The regulations governing GRRPs set forth specific requirements for operations, monitoring, and reporting (CCR Title 22, Division 4, Chapter 3, Water Recycling Criteria).

Prior to Expanded Project operation M1W would submit a revised Operation Optimization Plan (OOP) to the Central Coast Regional Water Quality Control Board (Regional Board) and State Water Board Division of Drinking Water. The OOP will identify and describe the operations, maintenance, analytical methods, monitoring necessary for the Expanded Project to meet all regulatory requirements. M1W would be responsible for ensuring that the OOP is, at all times, representative of the current operations, maintenance, and monitoring of the Expanded Project. In addition, monitoring and reporting requirements for the injection and monitoring wells would be outlined in a Waste Discharge Requirement/Water Recycling Requirement (WDR/WRR) and Monitoring and Reporting Program (MRP) to be issued by the Regional Board. The Regional Board would consult with the State Water Board, Division of Drinking Water and other affected regulatory stakeholders in the development of the WDR/WRR and MRP to satisfy regulatory requirements for monitoring of subsurface travel time, tracer testing, and other requirements.

M1W operations and maintenance staff, or its representatives, would conduct maintenance activities. The proposed product water conveyance pipeline could operate continuously for up to 24 hours a day. General operations and maintenance activities associated with pipelines would include annual inspections of the cathodic protection system and replacement of sacrificial anodes when necessary; inspection of valve vaults for leakage; testing, exercising and servicing of valves; vegetation maintenance along rights-of-way; and repairs of minor leaks in buried pipeline joints or segments.

General operations and maintenance activities associated with the new pipelines would include annual inspections of the cathodic protection system and replacement of sacrificial anodes when necessary; inspection of valve vaults for leakage; testing, exercising and servicing of valves; vegetation maintenance along rights-of-way; and repairs of minor leaks in buried pipeline joints or segments. No changes to the operational vehicle trips and employees would occur (see Table 2-10 of the Base PWM Project EIR).

Operation of the IWF in the Expanded Injection Well Area would occur using the same methods discussed in Section 2.10.3 of the Base PWM Project EIR and Reclamation's 2017 EA. Injection Wells and associated electrical and mechanical systems would operate 24 hour per day, 7 days per week throughout the year, although it is unlikely that all the wells would be actively injecting

at the same time for any length of time. Operations and maintenance staff would visit the site most likely once daily Monday through Friday nearly every week.

In addition to operation and maintenance of wells, workers would inspect above ground valves and appurtenances to assure proper function and to conduct and monitor backflush operations. Backflushing of each injection well would occur for about four hours weekly and would require discharge of the backflush water to the percolation basin. Approximately once per year, a disking machine would be used to scarify the bottom of the pond to increase/restore the percolation rate. No changes to the operational vehicle trips and employees would occur (see Table 2-10 of the Base PWM Project EIR).

3 Environmental Commitments

The following environmental commitments were adopted by the M1W Board of Directors when the SEIR was certified on April 26, 2021, to address impacts identified during the environmental review process (see **Appendix B**). The full text of these environmental commitments is detailed in the adopted MMRPs provided in **Appendix C,** for the Advanced Water Purification Facility Expansion, and **Appendix D**, for the Injection Well Facilities Phase 4, including Conveyance Facilities.

3.1 Aesthetics

- Mitigation Measure AE-4: Exterior Lighting Minimization.

3.2 Air Quality

- Mitigation Measure AQ-1: Construction Fugitive Dust Control.

3.3 Biological Resources

- Mitigation Measure BT-1a: Implement Construction Best Management Practices.
- Mitigation Measure BT-1b: Implement Construction-Phase Monitoring.
- Mitigation Measure BT-1c: Implement Non-Native, Invasive Species Controls.
- Mitigation Measure BT-1d: Conduct Pre-Construction Surveys for California Legless Lizard.
- Mitigation Measure BT-1f: Conduct Pre-Construction Protocol-Level Botanical Surveys within the remaining portion of the Biological Study Area.
- Mitigation Measure BT-1h: Implementation of Mitigation Measures BT-1a and BT-1b to Mitigate Impacts to the Monterey Ornate Shrew, Coast Horned Lizard, Coast Range Newt, Two-Striped Garter Snake, and Salinas Harvest Mouse.
- Mitigation Measure BT-1i: Conduct Pre-Construction Surveys for Monterey Dusky-Footed Woodrat.
- Mitigation Measure BT-1j: Conduct Pre-Construction Surveys for American Badger.
- Mitigation Measure BT-1k: Conduct Pre-Construction Surveys for Protected Avian Species, including, but not limited to, white-tailed kite and California horned lark.

- Mitigation Measure BT-1m: Minimize Effects of Nighttime Construction Lighting.
- Mitigation Measure BT-4. Fort Ord HMP Plant Species Salvage.

3.4 Cultural Resources

- Mitigation Measure CR-2b: Discovery of Archaeological Resources or Human Remains.
- Mitigation Measure CR-2c: Native American Notification

3.5 Energy Conservation

- Mitigation Measure EN-1: Construction Equipment Efficiency Plan.

3.6 Noise

- Mitigation Measure NV-1a: Drilling Contractor Noise Measures. Contractor
- Mitigation Measure NV-1c: Neighborhood Notice.

3.7 Public Services

- Mitigation Measure PS-3: Construction Waste Reduction and Recycling Plan

3.8 Transportation

- Mitigation Measure TR-3: Roadway Rehabilitation Program.

4 Affected Environment and Environmental Consequences

4.1 Affected Environment and Environmental Consequences of the No Action Alternative

The No Action alternative considered in this EA is essentially the same as the Proposed Action evaluated below. As described in **Section 2.2**, M1W would construct the Expanded Project whether or not Reclamation provides grant funding to assist with construction costs. Therefore, the No Project alternative and Proposed Action Alternative in this EA involve the construction of the same facilities and components.

The environmental setting and impact analyses of each resource topic are presented in Chapter 4 of the SEIR and summarized in **Section 2.2.1** of this document. Environmental Justice has been included in this EA (**Section 3.2.1.3**) as an additional resource discussion per NEPA requirements. See **Appendix F**.

4.2 Affected Environment and Environmental Consequences of the Proposed Action

This section describes the effects associated with the Proposed Action. Where applicable, the impact analysis from the Project-level CEQA documentation has been incorporated by reference. See **Appendix B** for more information.

Appendix B presents a summary of Expanded Project impacts, including component-by-component and cumulative impacts. See **Section 3** and **Appendix C** and **Appendix D** for mitigation measures adopted to address Expanded Project impacts. Other potential impacts found not to be significant and that do not require mitigation measures to reduce impacts include geology and soils, mineral resources, population and housing, public services, recreation, and utilities and service systems. This section discusses the outcome of prior environmental effects analyses of the Expanded Project for key topics that will occur with or without Reclamation providing additional funding. The key effect areas discussed include beneficial effects, cultural resources, Indian Trust Assets, Indian Sacred Sites, environmental justice groundwater resources, surface water resources, marine and ocean water quality, terrestrial biological resources, air quality/Clean Air Act Conformity, cultural resources, and cumulative and growth.

4.2.1 Beneficial Effects of the PWM Project

Reclamation found the following economic, social, technological, and environmental benefits of the PWM Project:

- The Expanded Project would replace up to 5,750 AFY of unauthorized Carmel River diversions for municipal use with additional groundwater pumping enabled by recharge of purified recycled water (and increase of up to 2,250 AFY above the base PWM Project);

- The Expanded Project would still provide additional recycled water to Salinas Valley growers for crop irrigation (up to 4,750 AFY);

- The Salinas Valley Groundwater Basin is in overdraft and the base PWM Project would assist those with groundwater wells to reduce the volume of water pumped from Salinas Valley aquifers;

- The Expanded Project would increase water supply reliability and drought resilience;

- The Expanded Project would maximize the use of recycled water in compliance with the state Recycled Water Policy; and

- The Expanded Project would reduce pollutant loads from urban and agricultural areas to sensitive environmental areas including the Salinas River and Monterey Bay.

4.2.2 Required Resource Discussions

Department of Interior Regulations, Executive Orders, and Reclamation Guidelines require a discussion of Indian Trust Assets (ITAs), Native American Indian sacred sites, and Environmental Justice when preparing environmental documentation. Section 4.6.2.1 of the Base Project Final EIR describes the regional cultural setting, including the pre-historic and historic regional setting. There are no changes in the regional setting since certification of the Base Project Final EIR affecting these resource discussions. Impacts to these resources were considered and found to be absent.

Indian Trust Assets

ITAs are legal interests in assets that are held in trust by the United States for federally recognized Indian tribes or individuals. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments" requires federal agencies to establish procedures for meaningful consultation and coordination with tribal officials in the development of federal policies that have tribal implications. Reclamation performed an ITAs evaluation during this NEPA review which stated:

"Based on the nature of the planned work it does not appear to be in an area that will impact Indian hunting or fishing resources or water rights nor is the proposed activity on actual Indian lands. It is reasonable to assume that the proposed action will not have any impacts on ITAs."

In addition, ONMS/MBNMS found that their Action authorizing the NPDES permit amendment for the Base PWM Project would not have tribal implications. The new and modified components of the Project to implement the Expanded Project are located within or immediately adjacent to the Base PWM Project components and thus, the same conclusions are considered applicable to the Expanded Project. See also Section 4.6 of the SEIR.

Indian Sacred Sites

Executive Order 13007 (May 24, 1996) requires that federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. Based on Northwest Information Center background research and surface survey described in Section 4.5 of the SEIR, there are no known Indian sacred, ceremonial, or gathering places in the Project area. The Expanded Project is not located on Indian or Native Hawaiian lands where Native American human remains, funerary objects, sacred objects, and cultural items may be present; therefore, the regulations and requirements of this act do not apply. However, there may be archaeological resources and/or human remains that could be considered tribal cultural resources in the Expanded Project area and the Project could have an effect on previously unknown resources. Mitigation measures listed in **Section 3.4** would apply and reduce those effects.

Environmental Justice

Executive Order 12898 requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects, including social and economic effects of its program, policies, and activities on minority populations and low-income populations. Both Reclamation and ONMS/MBNMS found that there is an absence of disproportionately high and adverse human health or environmental effects on minority populations and low-income populations due to the Base PWM Project.

The Expanded Project would provide additional water and recycled water that would be available to a wide range of the population with no disproportionate impacts on one population. The potential for human health adverse impacts have been fully evaluated in the Base PWM Project EIR, SEIR, and the Title 22 Engineering Report, and the Expanded Project was found to have no significant adverse health impacts. EPA confirmed these findings in their 2022 evaluation of the Project for potential WIFIA funding (see **Appendix F**).

4.2.3 Groundwater Resources

The expanded AWPF will produce purified recycled water that will meet or exceed all federal and state drinking water standards, including Title 22 of the California Code of Regulations. After wastewater is treated at the RTP, it will be diverted to the AWPF where it will undergo a four-step state-of-the-art purification process consisting of pre-ozonation, membrane filtration, reverse osmosis, and advanced oxidation using ultraviolet light with hydrogen peroxide. The AWPF product water after the UV disinfection is near-distilled-quality and therefore requires stabilization to prevent corrosion of conveyance pipelines. The water would then be conveyed to, and injected into, the Seaside Groundwater Basin.

The PWM Project (including its treatment processes, conveyance, and injection well facilities) has been reviewed, approved, and permitted by the SWRCBs Division of Drinking Water and the Central Coast Regional Water Quality Control Board (Central Coast RWQCB) to protect public health and water quality, as well as environmental compliance. The Waste Discharge Requirements and Water Recycling Requirements issued by the Central Coast RWQCB requires continuous water quality testing and sampling. The engineering report and anti- degradation analyses for the base PWM project was reviewed and approved by the SWRCB Division of Drinking Water and the Central Coast RWQCB. The agencies concluded that the Base PWM Project would ensure that the project exceeds Title 22 drinking water criteria, and that groundwater quality would not be degraded per state and federal anti-degradation policies. The analyses conducted included the assumption that the project would use municipal wastewater, irrigation return flows from agricultural land, industrial wastewater from City of Salinas agricultural processing facilities, and urban runoff including storm water. If the product water does not meet water quality requirements, the AWPF product water will be recirculate to the influent of the AWPF, or to the headworks of the RTP, and injections into Seaside Basin would cease until the system can operate to meet the required water quality standards/limits. (RWQCB, Order No. R3-2017-0003)

4.2.4 Surface Water Resources

The Base PWM Project was anticipated to result in impacts to (1) sensitive habitats including wetlands during construction of the Reclamation Ditch, and Blanco Drain diversions, (2) surface water flows and related hydrologic and shallow groundwater functions due to operation of the diversions, (3) diversion rate from the Salinas River was found to be consistent with maintaining the flows prescribed by the National Marine Fisheries Service for fisheries, including south central California coastal (S-CCC) steelhead, that may use the Lower Salinas River. The base PWM Project reduces discharge of poor-quality water to the Salinas River. Construction of those facilities is now complete, and they are operational.

As part of the SWRCB process for Water Rights Permits 21376 and 21377, the local agencies, NMFS, and CDFW agreed upon terms and conditions to be included in the permits to further reduce any impacts to S-CCC and surface water resources. The terms and conditions are outlined in the Biological

Assessment submitted to NMFS during the Section 7 consultation process for the base PWM Project. These requirements will ensure that lagoon levels do not decline substantially and that periodic flushing flows will continue in the Old Salinas River, which currently received flow from the lagoon on a regular basis. In most conditions, the diversions of water that currently flow to the Salinas River were determined to likely improve aquatic habitat conditions in the Lower Salinas River by reducing pollutant loads. As a result, the Proposed Action will have no effect and a potential beneficial effect on surface water resources.

No significant changes to the environmental setting or consequences related to biological resources nor surface water resources due to continued operation of these facilities would occur with the Expanded Project compared to those discussed in the Bureau's 2017 EA/FONSI.

Regarding the Clean Water Act, the EPA is the federal agency responsible for water quality management pursuant to the Clean Water Act (CWA) of 1977. The purpose of the CWA is to protect and maintain the quality and integrity of the nation's waters through Section 303 (Water Quality Standards and Implementation Plans), Section 401 (Water Quality Certification), and Section 402 (NPDES). The NPDES is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States (WOTUS). Under the CWA, Section 402, discharging pollutants to WOTUS is prohibited unless the discharge is in compliance with an NPDES permit.

M1W administers an approved pretreatment program under NPDES Permit R3-2018-0017. These activities are conducted in accordance with M1W Ordinance No. 2019-01 and Federal pretreatment regulations pursuant to 40 CFR 403 and Sec. 307 and 402 of the CWA. The WDR for the RTP and AWPF (Order No. R3-2018-0017, NPDES Permit No. CA0048551) allows M1W to discharge treated effluent from the M1W RTP and the reverse osmosis concentrate from the Base PWM Project to Monterey Bay via the existing outfall. M1W would need to amend their existing NPDES permit to accommodate increased discharges of RO concentrate associated Project modifications to the AWPF.

The Expanded Project's operational discharges of RO concentrate to the ocean through the M1W outfall would not violate water quality standards or WDRs, or otherwise substantially degrade water quality. See Chapter 4.13 of the SEIR for additional information. Additionally, Expanded Project construction would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means, as there are no wetlands located in the Project area. See **Appendix F** and **Appendix H**.

4.2.5 Marine and Ocean Water Quality

The Water Quality Control Plan for Ocean Waters of California (Ocean Plan) establishes water quality objectives and beneficial uses for waters of the Pacific Ocean adjacent to the California coast outside of estuaries, coastal lagoons, and enclosed bays.

In producing the highly purified water, the expanded AWPF would produce an increased volume of reverse osmosis concentrate, which would be piped to a proposed new brine and effluent receiving, mixing, and monitoring facility. The reverse osmosis concentrate would be discharged through the existing M1W outfall to Monterey Bay. The outfall runs from incorporated portions of Monterey County, ultimately reaching Monterey Bay after passing through land within the City of Marina. The M1W wastewater discharge is governed by NPDES permit R3-2018-0017 issued by the Central Coast RWQCB. M1W will obtain an amended permit from the Central Coast RWQCB to discharge the increased volumes of reverse osmosis concentrate. The National Oceanic and Atmospheric Administration (NOAA) – Monterey Bay National Marine Sanctuary (MBNMS) would also act to authorize the discharge permit under the Sanctuary Act as described in the Sanctuary Act and in the Memorandum of Agreement dated April 2015 between NOAA MBNMS, USEPA, SWRCB, Central Coast RWQCB, Association of Monterey Bay Area Governments (AMBAG), and the Coastal Commission.

M1W, through its consultant, Trussell Technologies, performed water quality quantitative analysis of the Expanded Project's ability to meet the Ocean Plan Water Quality objectives. In doing so, Trussell Technologies estimated a worst-case water quality under various operational scenarios for the wastewater that would be discharged through the ocean outfall and compared that discharge to the Ocean Plan objectives to determine whether there would be a significant effect on marine and ocean water quality. The results showed that the Expanded Project Project would not result in a significant effect on ocean water quality because the wastewater discharged through M1W's ocean outfall, including the Expanded Project's reverse osmosis concentrate, would consistently meet the water quality objectives of the Ocean Plan. As a result, the Proposed Action would have no adverse effects on ocean water quality.

4.2.6 Terrestrial Biological Resources

The Expanded Project is located within Monterey County and new facilities would be constructed in an unincorporated area of Monterey County and in the City of Seaside, which encompasses a broad range of biological resources. The AWPF expansion is entirely within the existing AWPF site (on a developed portion of the RTP). The new injection well facilities components of the Expanded Project would occur within areas known to be special status species habitat. The Expanded Project has the potential to effect both terrestrial biological resources and aquatic biological resources. The potential effects to each are discussed in more detail in **Table 4** below.

The official Service species list for the project was received on October 13, 2021. One federally threatened species is known within the Action Area: Monterey Spineflower. In addition, Monterey gilia and Monterey spineflower are known to occur immediately adjacent to the Action Area. Impacts associated with construction and permanent project features may include loss of individuals or habitat for Monterey spineflower. The project has been designed to avoid impacts to known locations of Monterey gilia. However, impacts to Monterey gilia and Monterey spineflower individuals or habitat may occur if work is conducted outside of the project limits.

Several migratory bird species protected by the Migratory Bird Treaty Act (MBTA) also have the potential to nest and forage within the Action Area. Temporary disturbance may occur to foraging migratory birds during construction activities. Additionally, if construction occurs during the nesting season, activities such as vegetation removal or site grading could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment within Action Area and immediately adjacent areas of the Action Area. Operation of the Expanded Project is not expected to result in impacts to bird species protected by the MBTA.

There are no areas of designated critical habitat within the Action Area. Therefore, the Proposed Action will not impact Critical Habitat.

Design features of the Proposed Action and the avoidance and minimization measures included above will reduce the effects of the Proposed Action to Monterey spineflower and Monterey gilia. However, construction activities are likely to adversely affect Monterey spineflower and may affect but are not likely to adversely affect Monterey gilia. Avoidance and minimization measures included in this document will reduce impacts to migratory birds. As such, the project may affect, but is not likely to adversely affect migratory birds. There are no areas of designated critical habitat within the Action Area. As such, the project will not affect critical habitat.

See also Section 5.2, **Appendix G** and **Appendix H** below regarding consultation and coordination under the Endangered Species Act and the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

Table 4. Federally Threatened or Endangered Species Evaluated in the Project Area

Scientific Name	Common Name	Status	General Habitat Description	Habitat Present /Absent	Rationale
PLANT SPECIES					
Astragalus tener var. titi	Coastal dunes milk- vetch	E	Coastal bluff scrub on sandy soils, coastal dunes, and mesic areas of coastal prairie at elevations of 1-50 meters. Annual herb in the Fabaceae family; blooms March-May.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Arenaria paluddicola	Marsh sandwort	E	Known from only two natural occurrences in Black Lake Canyon and at Oso Flaco Lake. Sandy openings of freshwater of brackish marshes and swamps at elevations of 3-170 meters. Stoloniferous perennial herb in the Caryophyllaceae family; blooms May-August.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Chorizanthepungens var.pungens	Monterey spineflower	T/CH	Maritime chaparral, cismontane woodland, coastal dunes, coastal scrub, and valley and foothill grassland on sandy soils at elevations of 3-450 meters. Annual herb in the Polygonaceae family; blooms April-June.	P	**Present/Potential**: Observed throughout the 2019 FSA, including within the Action Area. Suitable habitat is present in unsurveyed areas of the BSA and Action Area.
Erysimum menziesiissp. menziesii	Menzies' wallflower	E	Coastal dunes at elevations of 0-35 meters. Perennial herb in the Brassicaceae family; blooms March-June.	A	**Not Present:** Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Gilia tenuiflora ssp.arenaria	Monterey (sand)gilia	E	Maritime chaparral, cismontane woodland, coastal dunes, and openings in coastal scrub on sandy soils at elevations of 0-45 meters. Annual herb in the Polemoniaceae family; blooms April-June.	P	**Present/Potential**: Observed within the 2019 FSA; however, this species was not observed within the Action Area. Suitable habitat is present in unsurveyed areas of the BSA and Action Area.
Hesperocyparisgoveniana	Gowen cypress	T	Closed-cone coniferous forest and maritime chaparral at elevations of 30-300 meters. Evergreen tree in the Cupressaceae family. Natively occurring only at Point Lobos near Gibson Creek and the Huckleberry Hill Nature Preserve near Highway 68.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Lasthenia conjugens	Contra Costa goldfields	E/CH	Mesic areas of valley and foothill grassland, alkaline playas, cismontane woodland, and vernal pools at elevations of 0-470 meters. Annual herb in the Asteraceae family; blooms March-June.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.

Table 4. Federally Threatened or Endangered Species Evaluated in the Project Area (cont.)

Layia carnosa	Beach layia	E	Coastal dunes and coastal scrub on sandy soils at elevations of 0-60 meters. Annual herb in the Asteraceae family; blooms March-July.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Lupinus tidestromii	Tidestrom's lupine	E	Coastal dunes at elevations of 0-100 meters. Perennial rhizomatous herb in the Fabaceae family; blooms April-June. Only Monterey County plants are state-listed Endangered as var. tidestromii.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Piperia yadonii	Yadon's piperia (rein orchid)	E	Sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. Annual herb in the Orchidaceae family.	P	**Not Present/Potential:** Not identified within the 2019 FSA; however, suitable habitat is present in unsurveyed areas of the BSA and Action Area.
Potentilla hickmanii	Hickman's cinquefoil	E	Coastal bluff scrub, closed-cone coniferous forests, vernally mesic meadows, and freshwater marshes and swamps at elevations of 10-149 meters. Perennial herb in the Rosaceae family; blooms April-August.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Trifolium trichocalyx	Monterey clover	E	Sandy openings and burned areas of closed-cone coniferous forest at elevations of 30-240 meters. Annual herb in the Fabaceae family; blooms April-June.	A	**Not Present**: Not identified within the 2019 FSA. No suitable habitat within unsurveyed areas of the BSA.
Branchinecta lynchi	Vernal pool fairy shrimp	T	Require ephemeral pools with no flow. Associated with vernal pool/grasslands from near Red Bluff (Shasta County), through the central valley, and into the South Coast Mountains Region. Require ephemeral pools with no flow.	A	**Not Present:** No CNDDB occurrences within quads searched. California fairy shrimp (Linderella occidentalis) ARE known to occur in vernal pools in the vicinity of the BSA, but no vernal pool fairy shrimp have been identified. No habitat is present within the BSA.
Danus plexippus	Monarch Butterfly	C	Overwinters in coastal California using colonial roosts generally found in Eucalyptus, pine, and acacia trees.	A	**Not Present**: No suitable habitat within the BSA.
Euphilotes enoptes smithi	Smith's blue Butterfly	E	Most commonly associated with coastal dunes and coastal sage scrub plant communities in Monterey and Santa Cruz Counties. Plant hosts are *Eriogonum latifolium* and *E. parvifolium.*	A	**Not Present/Unlikely:** The host plants for this species were not identified within the areas surveyed in 2019. No other suitable habitat for host plants within unsurveyed areas of the Action Area.

Table 4. Federally Threatened or Endangered Species Evaluated in the Project Area (cont.)

AMPHIBIANS					
Ambystomacaliforniense	California tiger salamander	T/CH	Annual grassland and grassy understory of valley- foothill hardwood habitats in central and northern California. Need underground refuges and vernal pools or other seasonal water sources.	P	**Unlikely:** No breeding habitat is present within the BSA. Several breeding locations are known within the former Fort Ord and a small portion of the BSA and Action Area are located approximately 2.1 km from a known breeding pond (Fort Ord Pond 8). Although this small portion of the project is within the known dispersal distance for this species (2.2 km), the Action Area is constricted to the existing boundaries of Eucalyptus Road in this area and does not provide suitable upland habitat for this CTS.
Ambystoma macrodactylum Croceum	Santa Cruz long-toed salamander	E	Preferred habitats include ponderosa pine, montane hardwood-conifer, mixed conifer, montane riparian, red fir, and wet meadows. This is an isolated subspecies which occurs in a small number of localities in Santa Cruz and Monterey Counties. Adults spend the majority of the time in underground burrows and beneath objects. Larvae prefer shallow water with clumps of vegetation.	A	**Not Present:** No suitable habitat within the BSA. BSA is outside of the known current range for this species.
Rana draytonii	California red-legged frog	T/CH	Lowlands and foothills in or near permanent or late- season sources of deep water with dense, shrubby, or emergent riparian vegetation. During late summer or fall adults are known to utilize a variety of upland habitats with leaf litter or mammal burrows.	A	**Not Present:** No suitable breeding or upland habitat within or adjacent to the BSA. The nearest known breeding occurrence is located over 5 miles from the BSA.
BIRDS					
Brachyramphus marmoratus	Marbled murrelet(nesting)	T	Occur year-round in marine subtidal and pelagic habitats from the Oregon border to Point Sal. Partial to coastlines with stands of mature redwood and Douglas-fir. Requires dense mature forests of redwood and/or Douglas-fir for breeding and nesting.	A	**Not Present:** No suitable habitat within the BSA.
Charadrius alexandrinus nivosus	Western snowy plover	T/CH	Sandy beaches on marine and estuarine shores, also salt pond levees and the shores of large alkali lakes. Requires sandy, gravelly, or friable soil substrate for nesting.	A	**Not Present:** No suitable habitat within the BSA.

Table 4. Federally Threatened or Endangered Species Evaluated in the Project Area (cont.)

Empidonax traillii extimus	Southwestern willow flycatcher (nesting)	E	Breeds in riparian habitat in areas ranging in elevation from sea level to over 2,600 meters. Builds nest in trees in densely vegetated areas. This species establishes nesting territories and builds and forages in mosaics of relatively dense and expansive areas of trees and shrubs, near or adjacent to surface water or underlain by saturated soils. Not typically found nesting in areas without willows (*Salix sp.*), tamarisk (*Tamarix ramosissima*), or both.	A	**Not Present:** No suitable habitat within the BSA.
Gymnogyps californianus	California Condor	E/CH	Roosting sites in isolated rocky cliffs, rugged chaparral, and pine covered mountains 2000-6000 feet above sea level. Foraging area removed from nesting/roosting site (includes rangeland and coastal area - up to 19-mile commute one way). Nest sites in cliffs, crevices, potholes.	A	**Not Present:** No suitable habitat within the BSA.
Sterna antillarum browni	California least tern(nesting colony)	E	Sea beaches, bays; large rivers, bars.	A	**Not Present:** No suitable habitat within the BSA.
Vireo bellii pusillus	Least Bell's vireo	E	Riparian habitats. Breed in willow riparian forest supporting a dense, shrubby understory. Oak woodland with a willow riparian understory is also used in some areas, and individuals sometimes enter adjacent chaparral, coastal sage scrub, or desert scrub habitats to forage.	A	**Not Present:** No suitable habitat within the BSA.
FISH					
Eucyclogobius newberryi	Tidewater Goby	E/CH	Brackish water habitats, found in shallow lagoons and lower stream reaches. Tidewater gobies appear to be naturally absent (now and historically) from three large stretches of coastline where lagoons or estuaries are absent and steep topography or swift currents may prevent tidewater gobies from dispersing between adjacent localities. The southernmost large, natural gap occurs between the Salinas River in Monterey County and Arroyo del Oso in San Luis Obispo County.	A	**Not Present:** No suitable habitat within the BSA.

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Table 4. Federally Threatened or Endangered Species Evaluated in the Project Area (cont.)

NOTES FOR TABLE 4

Status Definitions

E = Listed as Endangered under the federal Endangered Species Act

T = Listed as Threatened under the federal Endangered Species Act

C = Candidate for listing under the federal Endangered Species Act

CH = Critical Habitat designated or proposed - does not necessarily mean BSA is within designated critical habitat or constituent elements are present

Habitat Definitions: A = Habitat absent; P = Habitat present

Rationale Definitions

Known = Species is known to occur within the Action Area

Potential = Species has a potential to occur within the Action Area based on presence of suitable habitat and known occurrences of the species within the vicinity

Unlikely = Appropriate habitat is present within the Action Area, but species is not likely to be present based on the species-specific reason provided

Not Present = Appropriate habitat is not present within the Action Area and/or species was not identified during focused surveys

Location Definitions

Action Area = all areas where permanent and temporary impacts are expected to occur as a result of the project activities

BSA = Biological Study Area; includes the Proposed Action Area, the development parcels on the former Fort Ord between Eucalyptus Road and the unpaved road along the border of the Fort Ord National Monument, and areas within and adjacent to the existing Blackhorse Reservoir Facility

FSA = Focused Survey Area; areas where focused botanical surveys were conducted in 2019; includes the entire Action Area and other limited areas of the BSA

4.2.7 Air Quality and Clean Air Act Conformity

The Expanded Project site is located in Monterey County (County), which is within the North Central Coast Air Basin (Basin) and under the jurisdiction of the Monterey Bay Air Resources District (MBARD). The County is federally designated as unclassified for particulate matter with a diameter of less than 10 micrometers (PM10) and is in attainment or unclassified for all other federal criteria pollutants based on 2020 data.

The SEIR found that with implementation of existing Mitigation Measure AQ-1 (Construction Fugitive Dust Control Plan) adopted by the M1W in April 2021, the Expanded Project would not result in any new significant impacts or worsen the severity of any previously identified significant impacts. This mitigation would reduce maximum daily on-site construction PM10 emissions to 57.3 pounds per day, below the threshold of 82 pounds per day.

The General Conformity Rule is used to determine if federal actions meet the requirements of the Clean Air Act (CAA) by ensuring that air emissions related to the federal action do not: cause of contribute to new violations of the National Ambient Air Quality Standards (NAAQS), increase the frequency or severity of any existing violation of NAAQS, or delay timely attainment of NAAQS or interim emission reduction.

The Project is located within the North Central Coast Basin Air Basin (NCCAB). Monterey Bay Air Resources District (formerly the Monterey Bay Unified Air Pollution Control District) is responsible for air monitoring, permitting, enforcement, long-range air-quality planning, regulatory development education, and public information activities related to air pollution in the NCCAB. The region is considered to be in attainment for all NAAQS and is not currently subject to any air basin State Implementation Plan requirements. Thus, the Proposed Action is exempt from the General Conformity Regulations for air quality, and a federal general conformity analysis report is not required.

Expanded Project construction would generate emissions from construction equipment exhaust, earth movement, construction workers' commutes, and material hauling. Operation of pump stations, wells, and treatment facilities would require use of electricity, which would generate greenhouse gas emissions. See **Appendix E** for the air quality and greenhouse gas analysis performed for the SEIR (Illingworth & Rodkin, October 2019). See Section 2.3.2 for the Expanded Project air quality mitigation measure, Chapter 4.3 of the SEIR and **Appendix B**, **Appendix C**, and **Appendix D**.

4.2.8 Cultural Resources

"Cultural resources" is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. Title 54 U.S.C. 300101 et seq., formerly and commonly known as the National Historic Preservation Act (NHPA), is the primary legislation for Federal historic preservation. Section 106 of the NHPA (54 U.S.C. 306108) requires Federal agencies to take into consideration the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment. Historic properties are those cultural resources that are

listed on or eligible for inclusion in the National Register of Historic Places (National Register). The implementing regulations at 36 CFR Section 800 for Section 106 describe the process that the Federal agency takes to identify historic properties within the area of potential effects and to assess the effects that the proposed undertaking would have on those historic properties, through consultations with the State Historic Preservation Officer (SHPO), Indian Tribes, and other identified consulting and interested parties.

As described in Section 1.1.2, "Background," of this EA, Reclamation proposes to award Title XVI/WIIN grant funds to M1W for their Expanded PWM Project. The expenditure of Federal appropriations is an undertaking as defined in 36 CFR Section 800.16(y) and involves a type of activity that has the potential to cause effects on historic properties under 36 CFR Section 800.3(a), which requires compliance with Title 54 U.S.C. Section 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found in 36 CFR Part 800. Prior to the identification of Reclamation's undertaking to provide Title XVI/WIIN grant funds, the U.S. Environmental Protection Agency (EPA), who is providing grant funds from the Water Infrastructure Finance and Innovation Act Program, completed NHPA Section 106 compliance for their undertaking only on February 17, 2022. Reclamation is the lead Federal agency for NHPA Section 106 compliance for this undertaking. As a result of this determination, Reclamation implemented the steps in the Section 106 process as outlined at §800.3 to §800.6.

The area of potential effects (APE) encompasses a cumulative total of approximately 96 acres, including pipelines, well work areas, access routes, and staging areas. The APE is located in unsectioned portions of T. 15 W., R. 1 E. and T. 15 W., R. 2 E., Mount Diablo Base and Meridian, as depicted on the Marina and Seaside 7.5' U.S. Geological Survey topographic quadrangle maps. While the APE totals approximately 96 acres, the proposed construction activities within this boundary only total approximately 16 acres. The maximum vertical extent of the APE would range between approximately 10 feet below the existing grade for the pipeline trenches and up to 1,100 feet to 1,400 feet below the existing ground surface for the injection wells and monitoring well.

Efforts to identify historic properties included a cultural resources investigation by Basin Research Associates (2021), which was conducted for the EPAs' undertaking to provide WIFIA funds. This investigation did not identify historic properties within the area of potential effect. The EPA consulted with the State Historic Preservation Officer (SHPO) on January 25, 2022 regarding a finding of no historic properties affected pursuant to 36 CFR § 800.4(d)(1). The SHPO responded with no objections to EPAs' findings and determination on February 17, 2022. The EPA subsequently concluded the Section 106 process.

A Sacred Lands File search by the Native American Heritage Commission (NAHC) was conducted in 2021 for the EPAs' undertaking. The NAHC provided a list of eleven Native American individuals and organizations that might have additional information or concerns. The NAHC sacred land file records search did not indicate the presence of Native American cultural resources in the vicinity of the EPA APE, which includes Reclamations' APE. Letters were sent in 2019. The Xolon-Salinan

Tribe responded, noting the area was not part of their traditional lands. The Esselen Tribe of Monterey County responded to request that the Tribe be consulted should cultural resources be encountered during construction. The NAHC was again contacted in 2021 for a supplemental Sacred Lands File search and additional letters were sent to Native American individuals and organizations. To date, no other responses have been received.

Reclamation sent letters to the Amah Mutsun Tribal Band, the Amah Mutsun Tribal Band of Mission San Juan Bautista, the Coastanoan Rumsen Carmel Tribe, the Coastanoan Ohlone Rumsen-Mutsen Tribe, Esselen Tribe of Monterey County, the Indian Canyon Mutsun Band of Costanoan, the Ohlone/Costanoan-Esselen Nation, the Rumsen Am:a Tur:ataj Ohlone, the Salinan Tribe of Monterey, Santa Rosa Rancheria Tachi Yokut, Tule River Indian Tribe, and the Wuksache Indian Tribe/Eshom Valley Band pursuant to 36 CFR § 800.4(a)(3) regarding our undertaking. If Native American concerns are subsequently raised, we will work to address them.

The proposed Project and the existing conditions in the APE have not changed. As there is no change in the inventory or findings since SHPO concurrence, further consultation has not been required. Reclamation determined that a finding of no historic properties affected pursuant to 36 CFR § 800.4(d)(1) would be appropriate for our undertaking. Reclamation will submit a consultation package to the SHPO notifying them of our finding of "no historic properties affected pursuant to 36 CFR § 800.4(d)(1)." A response from the SHPO is pending. Once a response is received from the SHPO with no objections to Reclamations' findings and determination, we can conclude the Section 106 process. However, any changes in project activities or inadvertent discoveries during implementation may require additional NHPA Section 106 compliance. Section 3.4 includes measures in the case of inadvertent discovery of cultural resources and human remains.

See **Appendix H** for federal consultation memos and correspondence and **Section 3.4** and **Appendix C** and **Appendix D** for mitigation measures for cultural resources.

4.2.9 Cumulative Analysis and Growth

The Supplemental EIR for the Expanded Project found that the project would potentially make a considerable contribution to significant cumulative growth inducing impacts. The project would remove a constraint to growth which would create other indirect impacts from such growth; however, the Supplemental EIR discussed that such growth is not necessarily adverse.

5 Consultation and Coordination

5.1 Summary of Agencies and Groups Consulted

Reclamation consulted and coordinated with M1W and the EPA in the preparation of this EA. M1W's early coordination with the federal action and permitting agencies has been a priority to reduce the potential for conflicts and delays. **Table 5** presents the status of federal consultation conducted for the Project.

Table 5. Lists of Federal Permits and Approvals for the Project

Permit/ Authorization	Agency	Status
NEPA for USEPA WIFIA Loan	EPA	For Base Project, not required. For Expanded Project: Completed Oct. 13, 2022.
USFWS Consultation	USFWS	For Base Project, Completed Dec. 2016. For Expanded Project, EPA completed Aug. 17, 2022.
NMFS Consultation	NMFS	For Base Project, Completed Dec. 2016. Not required for expansion components.
SHPO Consultation	SHPO	For Base Project, Completed May 2017. For Expanded Project, EPA completed on Feb. 17, 2022 and Reclamation will complete in 2023.
Clean Water Act 404	US Army Corps of Engineers	Completed January 18, 2017. Not required for expansion components.
Clean Water Act 401	Regional Board – Central Coast	Completed March 31, 2017. Not required for expansion components.
NPDES Permit Amendments	*Regional Board & Authorization by ONMS/MBNMS*	For Base Project, Completed 2018. For Expanded Project, to be initiated 2023 (amendment to M1W's existing operational permit, only)

5.2 EPA's Water Infrastructure Finance Innovation Act Loan Program

Expanded Project funding through EPA's WIFIA loan program is expected to be in place by February 2022. Through the WIFIA loan program, the EPA is acting as the Federal Lead Agency and as such conducted environmental review in compliance with NEPA. EPA issued a WIFIA Programmatic Environmental Assessment Memo on October 13, 2022 that analyzed the potential environmental impacts of the Expanded Project and issued a FONSI on October 13, 2022. This documentation fully covers the Proposed Action and constitutes EPA's compliance with the requirements of NEPA. Through its Cross-Cutter environmental review, concurrence letters of EPA's findings have also been received from the California State Historic Preservation Officer for completing National Historic Preservation Act and tribal consultation, and USFWS for completing Federal Endangered Species Act consultation and Migratory Bird Treaty Act compliance. See **Appendix F** and **Appendix H**.

5.3 Endangered Species Act

The ESA of 1973, as amended (16 U.S.C. § 1531, et seq.), provides for the conservation of species that are endangered or threatened (for information on endangered and threatened marine species, (see http://www.nmfs.noaa.gov/pr/species/esa/) throughout all or a significant portion of their range, and the conservation of the ecosystems on which they depend. Section 7(a)(2) of the ESA states that each Federal agency shall ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. When a Federal agency's action "may affect" a protected species, that agency is required to consult with NMFS or USFWS, depending upon the endangered species, threatened species, or designated critical habitat that may be affected by the action. If a federal agency determines that an action "may affect but is not likely to adversely affect" endangered species, threatened species, or designated critical habitat it informally consults with NMFS or the USFWS.

EPA reinitiated formal consultation with USWFS for its federal action considering providing funding for the Expanded Project under the WIFIA program. On June 15, 2022, EPA and M1W provided a Biological Assessment for Re-Initiation (DD&A, June 2, 2022), which is available at M1W's Pure Water Monterey Website (www.purewatermonterey.org). EPA determined the Expanded Project is likely to adversely affect Monterey spineflower, and may affect, but is not likely to adversely affect Monterey gilia. On August 17, 2022, USFWS responded to the re-initiation request with updated sections of the Biological Opinion concurring with EPA's determination for the Monterey gilia and that they do not expect that EPA's Proposed Action would substantially affect recovery of the Monterey spineflower; at worst, the Expanded Project could result in the disturbance or loss of approximately 0.2 acre of occupied habitat. These small effects would be reduced by mitigation measures further described in **Section 3** and **Appendix C** and **Appendix D.** See also **Appendix G** for the Biological Assessment for renitiation and **Appendix H** for federal consultation memos and correspondence.

5.4 Title 54 U.S.C. Section 306108, Commonly Known as Section 106 of the National Historic Preservation Act

Title 54 U.S.C. § 306108, commonly known as Section 106 of the National Historic Preservation Act (formerly 16 U.S.C. 470 et seq.), requires that Federal agencies take into consideration the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment. Historic properties are cultural resources that are listed on or eligible for inclusion in the National Register of Historic Places (National Register). The 36 CFR Part 800 regulations implement Section 106 of the NHPA and outline the procedures necessary for compliance with the NHPA.

Compliance with the Section 106 of the NHPA, as outlined in the Federal regulations at 36 CFR § 800, follows a series of steps that are designed to identify cultural resources and the level of effect that the proposed undertaking would have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the APE, determine if historic properties are present within that APE, determine the effect that the undertaking would have on historic properties, and consult with the State Historic Preservation Officer (SHPO) to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

Other applicable Federal cultural resources laws and regulations that could apply include, but are not limited to, the Native American Graves Protection and Repatriation Act (NAGPRA), and the Archaeological Resources Protection Act (ARPA).

The U.S. EPA has already completed their consultation with SHPO and Indian Tribes as described in Section 4.2.8 for the WIFIA loan for same Expanded Project. SHPO issued a letter stating that there are no historic properties within the area of potential effect for any of the Expanded Project components.

Reclamation will enter into consultation with the SHPO, notifying them of our finding of "no historic properties affected pursuant to 36 CFR Section 800.4(d)(1)." A response from the SHPO is pending. See **Appendix H** for all correspondence on the base Project and Expanded Project, including consultation completed by the U.S. EPA for their WIFIA loan program. Once a response is received from the SHPO with no objections to Reclamations' findings and determination, we can conclude the Section 106 process. However, any changes in project activities or inadvertent discoveries during implementation may require additional NHPA Section 106 compliance.

6 References

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Appendices

Appendix A. Project Description for Federal Consultation

Appendix A. Project Description for Section 106 Compliance Consultation

The proposed project intends to reduce discharge of secondary effluent into Monterey Bay and to replenish the Seaside Groundwater Basin with additional purified recycled water using a series of shallow and deep injection wells. To accomplish this goal, the existing Advanced Water Purification Facility (AWPF) capacity would be expanded and new pipelines, injection wells, and electrical and mechanical equipment would be installed to support the increased capacity.

Treatment Facilities

Additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances would be installed within the existing 3.5-acre Advanced Water Purification Facility (AWPF) area. The AWPF is located in the northwest corner of the larger Regional Treatment Plant (RTP) facility. See Figure 4. No new ground disturbance nor changes to the AWPF buildings or overhanging canopies would be necessary.

Construction activities would include cutting, laying, and welding pipelines and pipe connections; pouring concrete footings for attaching equipment to existing foundations (no new foundations), tanks, and other support equipment; installing piping, pumps, storage tanks, and electrical equipment within the existing facility; and testing and commissioning facilities. Construction equipment would include excavators, backhoes, graders, pavers, rollers, bulldozers, concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, and generators. Construction of the modifications would include equipment and materials delivery and installation, without any grading earthmoving, paving and only internal building structure modifications. Mechanical components of the ozone pretreatment, membrane filtration systems, reverse osmosis, advanced oxidation, and post-treatment facilities would be prefabricated and delivered to the site for installation.

In addition, the existing product water pump station at the Regional Treatment Plant would need to be upgraded by adding a new pump to an existing pump station, Section 2.6.2 of the SEIR

Conveyance Facilities

A new Product Water Conveyance Pipeline would be constructed from the existing Blackhorse Reservoir to the Expanded Injection Well Area to accommodate the increased product water yield and deliver it to the Injection Well Facilities (IWF) (see Figure 3). In total, the new 24-inch diameter pipeline would be approximately 2.3 miles long, extending from the Blackhorse Reservoir past proposed Well Sites #5, #6 and #7 to terminated at existing Well Site #1. The northern part of the pipeline would be located within an existing unpaved access road servicing in-place utility locations. The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road. An additional 1,000 feet of 12-inch diameter pipeline

for backflushing wells would be installed between Well Site #6 and Well Site #7 along the same alignment as the Product Water Conveyance Pipeline.

Construction activities within roadways would be restricted to the right-of-way approved by the applicable agency for public right-of-way and property owner for private roads. All roadways disturbed during pipeline installation would be restored. Generally, trench spoils would be temporarily stockpiled within the construction easement, then backfilled into the trench after pipeline installation.

The conveyance pipelines would be installed using conventional open-trench construction techniques as well as horizontal directional drilling method. Trench widths would range between 6 feet and 12 feet wide due to the nature of the sandy soils. Most pipeline trenches would measure approximately 10 feet deep to allow four to five feet of cover. A portion of the water conveyance pipeline from Well Site #1 to Well Site #7, would be installed using horizontal directional drilling. The borehole would be approximately 24 inches in diameter. Entry and receiving pits would measure approximately 20 feet by 50 feet and 8-feet deep. The pipeline in this portion would be installed up to a maximum depth of 90 feet below grade.

The construction sequence for open trench pipeline installation would typically include clearing and grading the ground surface along the pipeline alignment; excavating the trench; shoring, if required; preparing and installing pipeline sections; installing vaults, manhole risers, manifolds, and other pipeline components; backfilling the trench with non-expansive fills; restoring preconstruction contours; and revegetating or paving the pipeline alignments, as appropriate. A conventional backhoe, excavator, or other mechanized equipment would be used to excavate trenches. The typical trench width would be 6 feet wide and up to 8 feet deep; however, vaults, manhole risers, and other pipeline components could require wider excavations up to 25-feet wide and up to 10-feet deep.

Injection Well Facilities (IWF)

Modifications to the IWF would include construction of additional injection and monitoring wells, an additional backflush pipeline and percolation basin, and new electrical and mechanical equipment. The Expanded Injection Well Area would contain up to three well sites, numbered #5 through #7. Two new deep injection wells would be constructed and operated at Well Sites #6 and #7. Well Site #5 is included for planning purposes only and is not proposed to be developed as part of this action.

One monitoring well may be installed within the paved right-of-way of Eucalyptus Road if required by the State Board Department of Drinking Water. The monitoring well would not require any above ground infrastructure besides an approximate 12-inch diameter manhole cover. The monitoring well will extend as far as 1,100 feet below ground surface with a borehole diameter of no more than 14 inches.

The backflush facilities at Well Sites #6 and #7would include a flow meter, a backflush pump and 400-hp motor, and an electrical cabinet, and a monitoring and supervisory control and data acquisition (SCADA) system. A backflush basin for percolation water into the vadose zone

would be constructed between Well Sites #6 and #7. Electrical power supply/transformer, variable frequency drives (VFDs), and motor control buildings would be built for PG&E power supply at each Well Site. The electrical and SCADA equipment would be houses in new 16-foot by 24-foot electrical control buildings.

Well Installation

Well installation would typically follow a two-step process: 1) drilling and logging, and installation; 2) testing and equipping. The Deep Injection Well (DIW) would be drilled with rotary drilling methods. The method would be customized to minimize borehole impacts from drilling fluids and may incorporate air rotary methods or specialized drilling fluids (such as polymers). A 34-inch diameter borehole would be drilled. The injection wells would be drilled to a maximum depth of 1,200 feet below ground surface. The monitoring well would be drilled to a maximum depth of 1,200 feet below ground surface. A temporary diesel pump (up to 500-hp) would be used for 24 to 36 hours at each well to develop and test the well after construction.

Backflush Pipeline and Percolation Basin

Percolation basins are required for disposal of periodic well backflushing cycles, and for disposal of well development and testing water for new or rehabilitated wells. Percolation basins located within the wellfield recharge to the vadose zone. The new percolation basin would have a capacity of 4.0 acre-feet, requiring the excavation of approximately 7,500 cubic yards of material and placing it to create a levee around the percolation basin. The total area of soil disturbance is approximately 1.5-acres. Temporary disturbance will measure 500 feet by 200 feet with a maximum depth of 20 feet; permanent component footprint is 500 feet by 120 feet and up to 10 feet deep. A 20-foot tall light post for safety lighting will be located near the backflush basin, and an 8-foot tall metal fence will be built around the basin.

To construct the backflush pipeline and basin, the contractor would excavate pipe trenches, retain the spoilage on site, import and install bedding material, and lay pipe, and backfill and compact trench. The temporary construction area along the alignment of the 12-inch diameter backflush water pipeline would be approximately 25 to 50 feet wide, for its approximate 1,000-foot length, totaling approximately 1.2 acres. The depth of the pipeline trench would be approximately 8 feet deep and up to 5 feet wide to allow for bedding of the pipe with about 3 to 4 feet of cover material.

Electrical and Mechanical Equipment

A main electrical power supply/transformer and motor control building would be built at each new injection well site for PG&E power supply. The following activities would be required to construct the pump motor control and electrical conveyance facilities: (1) excavation of up to 12-feet deep to level the sites and create foundation for structures, spoilage handling, import and install bedding material, building foundation, trench, place concrete, backfill and compact trench, finish concrete floor of electrical building ; (2) install exterior electrical control cabinets on concrete pads at the new injection well sites (only the well pad and cabinets will be on concrete, the remainder of the site will be base rock, only); and (3) for electrical buildings, construct block walls, doors, louvers, roof and appurtenances, then interior finishes, lighting and HVAC; and electrical equipment and wiring. Figure 6 shows a diagram of the main electrical power supply/transformer and pump motor control building to be built at each of the two well sites.

The temporary construction area would be approximately 25 to 50 feet wide within the alignment of the water pipelines. Approximately 4,500-LF of buried electrical power conduit will be installed by open trench between well site 7 and the existing electrical building. The remaining 1,000 LF of power and controls conduit will be within the same construction footprint as the backwash pipeline. Installation of a buried electrical power conduit and instrumentation conduits would be underground and encased in a concrete duct bank. The duct bank trench would be approximately 4 feet wide and 4.5 to 5 feet deep to allow for about 3 feet of cover material. The electrical control building that would house the electrical and instrumentation (SCADA) transmission equipment would be approximately 16 feet by 24 feet. Its foundation construction would be slab-on-grade; hence, excavation would be only about 3 feet deep. The construction surface area would be about 600 square feet.

Staging

All construction and staging areas at the AWPF would be within the existing 3.5-acre facility. Staging areas for materials, equipment, and vehicle parking would also be designated along conveyance pipeline alignments within the construction work areas and on adjacent roadways.

In addition to excavation and grading at the injection well and backflush basin sites, clearing and grubbing may occur in staging areas with up to six inches of potential disturbance during placement and movement of personnel and heavy equipment. Construction equipment and materials associated with pipeline installation would be stored along pipeline alignments and/or at nearby designated staging areas.

Spoiling

Any construction debris (excess soil, rock, construction material, and debris) will be disposed of at the regional landfill.

Appendix B. Summary of Impacts and Mitigation Measures for Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project

Appendix B.
Summary of Impacts and Mitigation Measures for the Monterey One Water components of the Expanded Pure Water Monterey Groundwater Replenishment Project

Tables B-1 and B-2 contain the project-level and cumulative impacts and mitigation measures of the Expanded Pure Water Monterey (PWM) Groundwater Replenishment Project components that would be constructed by Monterey One Water and funded by the US Bureau of Reclamation's WaterSmart Grant. The source of the information is the Supplemental Environmental Impact Report certified by the Monterey One Water Board of Directors on April 29, 2021, as modified by the Addendum to the SEIR November 2021. In the Impact Statements, the phrase "Proposed Modifications" is used. This phrase was used in the SEIR documents and refers to changes to the existing (and operational) PWM Project that would be constructed, and operated together with the existing project facilities, to implement the Expanded PWM Project.

The following acronyms occur:

Impact Determinations:

NI – No Impact

LS – Less than Significant

LSM – Less than Significant with Mitigation

SU – Significant and Unavoidable

BI – Beneficial Impact

M1W Expanded Project Components:

AWPF – Advanced Water Purification Facility (as Expanded)

PWCP – New Product Water Conveyance Pipeline

IWF – Expanded Injection Well Facilities including November 2021 Approved Changes

The following notes apply to Table 1 as indicated:

Note 1: Under Impact AQ-1, the implementation of each component when looked at individually would not a have a significant impact; it is only when all components are implemented together (with overlapping construction schedules) that a significant impact would occur triggering Mitigation Measures to reduce the impact to less than significant (LS).

Note 2: For concentrations of total dissolved solids and chloride, the impact would be beneficial; for all other water quality parameters, the impact would be less than significant.

Table B-1. Summary of Project-Level Impacts and Mitigation Measures for M1W Components of Expanded PWM Project

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
AE-1: Construction Impacts on Scenic Views, Scenic Resources and Visual Quality of the Surrounding Areas. Construction of the Proposed Modifications would not result in substantial effects on scenic views, scenic resources, or the visual character or quality of public views of the areas surrounding the Proposed Modifications facilities.	NI	LS	LS	LS	None required.
AE-2: Construction Impacts due to Temporary Light and Glare. Construction of the Proposed Modifications could result in substantial, temporary sources of light or glare.	LS	NI	LS	LSM	**AE-2:** Minimize Construction Nighttime Lighting. (Applies to the Conveyance Pipelines).
AE-3: Degradation of Visual Quality of Sites and Surrounding Areas. Proposed Modifications would not result in a substantial degradation of the visual character of the project area and its surroundings.	LS	NI	LS	LSM	**AE-3:** Provide Aesthetic Screening for New Above-Ground Structures. (Applies only to the non-M1W CalAm Extraction Wells, which will not be funded by the USBR Grant).
AE-4: Impacts due to Permanent Light and Glare during Operations. Operation of Proposed Modifications may result in a substantial new source of light or glare that would adversely affect day or nighttime views in the area.	LS	NI	LSM	LSM	**AE-4:** Exterior Lighting Minimization. (Applies to the IWF only).
AQ-1: Construction Criteria Pollutant Emissions. Construction of the Proposed Modifications would result in emissions of criteria pollutants, specifically PM10, that may result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard.	LSM (Note 1)	LSM (Note 1)	LSM (Note 1)	LSM (Note 1)	**AQ-1:** Construction Fugitive Dust Control Plan. (Applies to All M1W Expanded Project Components).
AQ-2: Construction Exposure of Sensitive Receptors to Pollutant Emissions. Construction of the Proposed Modifications would not expose sensitive receptors to substantial pollutant concentrations.	LS	LS	LS	LS	None required.
AQ-3: Construction Odors. Construction of the Proposed Modifications would not result in other emissions (e.g., odors) that would adversely affect a substantial number of people.	LS	LS	LS	LS	None required
AQ-4: Construction Greenhouse Gas Emissions. Construction of the Proposed Modifications would generate greenhouse gas emissions, either directly or indirectly, but would not cause the Project with the Proposed Modifications to make a considerable contribution to significant cumulative impacts due to greenhouse gas emissions and the related global climate change impacts.	--	--	--	--	**Overall Project: LS:** The construction of the Expanded Project would not make a considerable contribution to significant cumulative impacts due to greenhouse gas emissions and the related global climate change impacts. **Mitigation Measure(s):** None required**.**
AQ-5: Operational Criteria Pollutant Emissions. Operation of the Project with the Proposed Modifications would not expose sensitive receptors to substantial pollutant concentrations.	LS	LS	LS	LS	None required.
AQ-6: Operational Greenhouse Gas Emissions. Operation of the Proposed Modifications would generate GHG emissions, either directly or indirectly. These emissions would not cause the Project with the Proposed Modifications to exceed significance thresholds such that they would result in a considerable contribution to significant cumulative impacts of GHG emissions. In addition, the Proposed Modifications would not conflict with applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions.	--	--	--	--	**Overall Project: LS:** The Expanded Project would not make a considerable contribution to significant cumulative impacts of greenhouse gas emissions and the related global climate change impacts. None required.
BF-1: Habitat Modification Due to Construction of Diversion Facilities.	NI	NI	NI	NI	None required.

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
BF-2: Interference with Fish Migration Due to Project Operations.	NI	NI	NI	NI	None required.
BF-3: Reduction in Fish Habitat or Fish Populations Due to Project Operations.	NI	NI	NI	BI	None required.
BT-1: Construction Impacts to Special-Status Species and Habitat. Construction of the Proposed Modifications may adversely affect, either directly or through habitat modification, special-status plant and wildlife species and their habitat within the Biological Study Area.	NI	LSM	LSM	LSM	**BT-1a:** Implement Construction Best Management Practices. (Applies to All M1W Expanded Project Components, except the AWPF) **BT-1b:** Implement Construction-Phase Monitoring. (Applies to All M1W Expanded Project Components, except the AWPF) **BT-1c:** Implement Non-Native, Invasive Species Controls. (Applies to All M1W Expanded Project Components, except the AWPF) **BT-1d:** Conduct Pre-Construction Surveys for California Legless Lizard. (Applies to PWCPs, IWF) **BT-1e:** Prepare and Implement Rare Plant Restoration Plan to Mitigate Impacts to Kellogg's Horkelia. (Applies to PWCP and IWF) **BT-1f:** Conduct Pre-Construction Protocol-Level Botanical Surveys within the remaining portion of the Biological Study Area. (Applies to All M1W Expanded Project Components, except the AWPF) **BT-1h:** Implementation of Mitigation Measures BT-1a and BT-1b to Mitigate Impacts to the Monterey Ornate Shrew, Coast Horned Lizard, Coast Range Newt, Two-Striped Garter Snake, and Salinas Harvest Mouse. (Applies to IWF) **BT-1i**: Conduct Pre-Construction Surveys for Monterey Dusky-Footed Woodrat. (Applies to IWF) **BT-1j:** Conduct Pre-Construction Surveys for American Badger. (Applies to IWF) **BT-1k:** Conduct Pre-Construction Surveys for Protected Avian Species, including, but not limited to, white-tailed kite and California horned lark. (Applies to All M1W Expanded Project Components, except the AWPF) **BT-1m:** Minimize effects of nighttime construction lighting. (Applies to IWF)
BT-2: Construction Impacts to Sensitive Habitats. Proposed Modifications construction may adversely affect sensitive habitats (including riparian, wetlands, and/or other sensitive natural communities) within the Biological Study Area.	NI	LS	LS	LS	None required.

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
BT-3: Construction Conflicts with Local Policies, Ordinances, or Approved Habitat Conservation Plan. Construction of the Proposed Modifications would potentially conflict with local policies or ordinances protecting biological resources. A potential conflict may occur if the Fort Ord HMP plant species on the former Fort Ord that do not require a take authorization from the Service or CDFW are impacted, and salvage is not conducted. There are no approved HCPs applicable to the Proposed Modifications.	NI	LSM	LSM	LSM	**BT-4:** Fort Ord HMP Plant Species Salvage. (Applies to PWCP, Expanded IWF)
CR-1: Construction Impacts on Archaeological Resources or Human Remains. Construction of the Proposed Modifications may result in a substantial adverse change in the significance to unknown archaeological resources during construction and/or encounter unknown human remains.	LSM	LSM	LSM	LSM	**CR-2b:** Discovery of Archaeological Resources or Human Remains. (Applies to All M1W Expanded Project Components). **CR-2c:** Native American Notification (Applies to All M1W Expanded Project Components)
CR-2: Construction Impacts on Unknown Paleontological Resources. Construction of the Proposed Modifications would not result in damage to or destruction of unknown paleontological resources.	LS	LS	LS	LS	None required.
EN-1: Construction Impacts due to Temporary Energy Use. Proposed Project and Project Modifications construction could result in wasteful or inefficient use of energy if construction equipment is not maintained or if haul trips are not planned efficiently. The Proposed Project and Project Modifications would not conflict with existing energy standards.	LSM	LSM	LSM	LSM	**EN-1:** Construction Equipment Efficiency Plan. (Applies to all Expanded Project components).
EN-2: Operational Impacts due to Energy Use. Proposed Project operations would not result in the consumption of energy such that existing supplies would be substantially constrained nor would the Project result in the unnecessary, wasteful, or inefficient use of energy resources.	LS	LS	LS	LS	None required.
GS-1: Construction-Related Erosion or Loss of Topsoil. Construction of the Proposed Modifications would not result in substantial soil erosion or the loss of topsoil.	LS	LS	LS	LS	None required.
GS-2: Construction-Related Soil Collapse and Soil Constraints during Pipeline Trenching. Construction of some Proposed Modifications pipeline components would be located on geologic units or soils that are unstable, or that may become unstable during project construction, and potentially result in soil instability or collapse; however, this exposure would not result in a substantial risk to people or structures.	LS	LS	LS	LS	None required.
GS-3: Exposure to Seismic Ground Shaking and Liquefaction. The Proposed Modifications would be located in a seismically active area; however, operations of the Proposed Modifications would not expose people or structures to a substantial risk of loss, injury, or death involving exposure to seismic groundshaking and liquefaction.	LS	LS	LS	LS	None required.
GS-4: Hydro-Collapse of Soils from Well Injection. Operation of the Proposed Modifications would not create a substantial risk to life or property due to its facilities being located on a geologic unit or soils that are unstable, or that would become unstable as a result of hydro-collapse.	NI	NI	LS	LS	None required.
HH-1: Use and Disposal of Hazardous Materials During Construction. Construction of the Proposed Modifications would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction.	LS	LS	LS	LS	None required.

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
HH-2: Accidental Release of Hazardous Materials During Construction. Construction of the Proposed Modifications would not create a significant hazard due to upset and accident conditions involving the release of hazardous materials into the environment.	LS	LS	LS	LS	None required.
HH-3: Construction of Facilities on Known Hazardous Materials Site. Construction of the Proposed Modifications would occur on a known hazardous materials site pursuant to Government Code Sec. 65962.5; however, the Proposed Modifications would not result in a significant hazard to people or the environment.	LS	LS	LS	LS	None required.
HH-4: Use of Hazardous Materials During Construction Within 0.25-Miles of Schools. Construction of the Proposed Modifications would not result in nor create a significant hazard to the public or the environment due to handling of hazardous materials or hazardous emissions within 0.25 mile of a school during construction.	LS	LS	LS	LS	None required.
HH-5: Wildland Fire Hazard during Construction. Construction of the Proposed Modifications would not increase the risk of wildland fires in high fire hazard areas.	LS	LS	LS	LS	None required.
HH-6: Use and Disposal of Hazardous Materials During Operation. Operations of the Proposed Modifications would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	LS	LS	LS	LS	None required.
HH-7: Operation of Facilities on Known Hazardous Materials Site. Proposed Modifications facilities would be located on a known hazardous materials site; however, the Proposed Modifications would not result in a significant hazard to people or the environment.	LS	LS	LS	LS	None required.
GW-1: Construction Groundwater Depletion, Levels, and Recharge. Construction of the Proposed Modifications components would not deplete groundwater supplies nor interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of local groundwater levels.	NI	LS	LS	LS	None required.
GW-2: Construction Groundwater Quality. Construction of the Proposed Modifications would not violate any water quality standards or otherwise degrade water quality.	NI	LS	LS	LS	None required.
GW-3: Operational Groundwater Depletion and Levels: Salinas Valley Groundwater Basin. Operation of the Project with the Proposed Modifications would not deplete groundwater supplies in the Salinas Valley Groundwater Basin nor interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater levels in the Salinas Valley Groundwater Basin.	NI	NI	NI	BI	None required.
GW-4: Operational Groundwater Depletion and Levels: Seaside Basin. Operation of the Project with the Proposed Modifications would not deplete groundwater supplies in the Seaside Basin nor interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater levels in the Seaside Basin.	LS	LS	LS	LS	None required.
GW-5: Operational Groundwater Quality: Salinas Valley. Operation of the Proposed Project would not degrade groundwater quality in the Salinas Valley.	NI	NI	NI	BI	None required.

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
GW-6: Operational Groundwater Quality: Seaside Basin. Operations of the Project with the Proposed Modifications would not degrade groundwater quality in the Seaside Basin, including due to injection of purified recycled water into the basin.	NI	NI	BI/LS (Note 2)	BI/LS (Note 2)	None required.
HS-1: Construction Impacts to Surface Water Quality due to Discharges. Construction of the Proposed Modifications involve well drilling and development. Dewatering of shallow groundwater during excavation would generate water requiring disposal. Compliance with existing regulatory requirements would ensure that water disposal during construction would not violate any water quality standards or waste discharge requirements or substantially degrade surface water quality, would not cause substantial erosion or siltation, and would not otherwise substantially degrade surface water quality.	LS	LS	LS	LS	None required.
HS-2: Construction Impacts to Surface Water Quality due to Earthmoving and Drainage Alterations. Construction of the Proposed Modifications would not violate any water quality standards or waste discharge requirements, would not cause substantial erosion or siltation, and would not otherwise substantially degrade surface water quality including marine water quality, due to earthmoving, drainage alterations, and use of hazardous chemicals.	LS	LS	LS	LS	None required.
HS-3: Operational Impacts to Surface Water Quality due to Well Maintenance Discharges. Operation of the Proposed Modifications would not violate any water quality standards or waste discharge requirements, would not cause substantial erosion or siltation, and would not otherwise substantially degrade surface water quality due to well maintenance discharges.	NI	NI	LS	LS	None required.
HS-4: Operational Marine Water Quality due to Ocean Discharges. The Proposed Modifications' operational discharges of reverse osmosis concentrate to the ocean through the M1W outfall would not violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.	LS	NI	NI	LS	None required.
HS-5: Operational Drainage Pattern Alterations. The Proposed Modifications would alter existing drainage patterns by increasing impervious surfaces, but would not substantially increase the rate or amount of runoff such that it would: (1) cause erosion or siltation on- or off-site, (2) cause flooding on- or offsite, (3) exceed the existing storm drainage system capacity, or (4) impede or redirect flood flows.	LS	LS	LS	LS	None required.
HS-6: Operational Carmel River Flows. Operations of the Proposed Modifications would result in reduced pumping of the Carmel River alluvial aquifer resulting in increased flows in Carmel River that would benefit habitat for aquatic and terrestrial species.	BI	BI	BI	BI	None required.
LU-1: Operational Consistency with Plans, Policies, and Regulations. The Proposed Modifications would have one or more components that would potentially conflict, or be inconsistent with, applicable land use plans, policies, and regulations without implementation of mitigation measures identified in this Supplemental EIR.	LSM	LSM	LSM	LSM	All other mitigation measures

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
MR-1: Operational Impacts on Marine Biological Resources. Operation of the Proposed Modifications would not result in substantial adverse effects on candidate, sensitive, or special-status species and would not interfere substantially with the movement of any native resident or migratory fish or wildlife species.	LS	NI	NI	LS	None required.
NV-1: Construction Noise. Construction would result in a temporary increase in ambient noise levels in the vicinity of all Proposed Modifications sites. Temporary construction noise would not be substantial at most construction sites, except at the CalAm Extraction Wells (non-M1W components, which will not be funded by the USBR Grant).	LS	LSM	LS	SU	**NV-1a:** Drilling Contractor Noise Measures. (Applies to Expanded IWF) **NV-1c:** Neighborhood Notice. (Applies to Expanded IWF)
NV-2: Operational Noise. Operation of the Proposed Modifications would potentially increase existing noise levels, but would not exceed noise level standards except at CalAm Extraction Wells, which will not be funded by the USBR Grant.	LS	LS	LS	LSM	**NV-2**: Stationary-Source Noise Controls. (applies only to non-M1W components, which will not be funded by the USBR Grant)
PH-1: Construction-Related Growth Inducement. Construction of the Proposed Modifications would result in temporary increases in construction employment but would not induce substantial population growth.	-	-	-	LS	None required.
PH-2: Operations-Related Growth Inducement. Operation of the Proposed Modifications would not result in substantial population growth directly during project operations.	-	-	-	LS	None required.
PS-1: Construction Public Services Demand. Construction of the Proposed Modifications would not result in increased demands for fire and police protection services, schools, or parks that would result in the need for new or physically altered facilities to maintain service capacity or performance objectives.	LS	LS	LS	LS	None required.
PS-2: Construction Landfill Capacity. Construction of the Proposed Modifications would result in generation of solid waste; however, the solid waste would be disposed at a landfill with sufficient permitted daily and overall capacity to accommodate the project's solid waste disposal needs.	LS	LS	LS	LS	None required.
PS-3: Construction Solid Waste Policies and Regulations. Construction of the Proposed Modifications would potentially conflict with State and local statutes, policies and regulations related to solid waste.	LSM	LSM	LSM	LSM	**PS-3:** Construction Waste Reduction and Recycling Plan. (Applies to All M1W Expanded Project Components).
PS-4: Public Services Demand During Operation. Operation of the Proposed Modifications would not result in increased demands for fire and police protection services, schools, or parks that would result in the need for new or physically altered facilities to maintain service capacity or performance objectives.	LS	LS	LS	LS	None required.
PS-5: Landfill Capacity for Operations. Operation of the Proposed Modifications would not result in adverse effects on landfill capacity or be out of compliance with Federal, State, and local statutes and regulations related to solid waste.	LS	LS	LS	LS	None required.
TR-1: Construction Traffic. Construction of the Proposed Modifications would result in a temporary increase in traffic volumes on regional and local roadways due to construction-related vehicle trips, which would not result in conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.	LS	LS	LS	LS	None required.

Impact Statement	AWPF	PWCP	IWF	Overall	Mitigation Measure Number, Name, and Applicability
TR-2: Construction-Related Traffic Increases, Safety and Access Limitations. Construction activities could result in temporary traffic increases, safety hazards, and/or disruption of access.	LS	LS	LS	LSM	**TR-2**: Traffic Control and Safety Assurance Plan. (Applies to non-M1W components, which will not be funded by the USBR grant).
TR-3: Construction-Related Roadway Deterioration. Construction truck trips could result in increased wear-and-tear on the designated haul routes, which could result in temporary impacts to performance of the regional circulation system.	LSM	LSM	LSM	LSM	**TR-3:** Roadway Rehabilitation Program (Applies to All M1W Expanded Project Components).
TR-4: Construction Parking Interference. Construction activities may temporarily affect parking availability.	LS	LS	LS	LSM	**TR-4**: Construction Parking Requirement (Applies to non-M1W Components which will not be funded by the USBR Grant).
TR-5: Operational Traffic. Operation and maintenance of the Proposed Modifications would result in small traffic increases on regional and local roadways, but would not substantially affect the performance of the regional circulation system or result in a significant increase in VMT.	LS	LS	LS	LS	None required.
WW-1: Construction-Related Water Demand. The Proposed Modifications would result in a temporary increase in water use due to construction-related demand. Existing water supplies would be sufficient to serve this construction-related demand. No new or expanded water supply sources are warranted.	LS	LS	LS	LS	None required.
WW-2: Construction-Related Wastewater Generation. The Proposed Modifications would result in a temporary increase in wastewater generation due to demand from construction workers, but existing wastewater treatment facilities have sufficient capacity to serve construction-related demands.	LS	LS	LS	LS	None required.
WW-3: Operational Water Supply. Sufficient water supplies are available for operation of the Proposed Modifications.	LS	LS	LS	LS	None required.
WW-4: Operational Wastewater Treatment Capacity. Operation of the Proposed Modifications would not result in a determination by the wastewater treatment provider that would serve the project that it has inadequate capacity to serve the Proposed Modifications' projected demand in addition to M1W's existing commitments.	LS	LS	LS	LS	None required.
WW-5: Operational Need for New Water or Wastewater Treatment Facilities or Expansion. Operation of the Proposed Modifications would not result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities beyond those evaluated in this Supplemental Draft EIR.	LS	LS	LS	LS	None required.

Table B- 2. Summary of Cumulative Impacts and Mitigation Measures for M1W Components of Expanded PWM Project

#	**Topical Section/ Cumulative Impact Issue**	**Determination of Significance and Discussion of Contribution of the Proposed Modifications to Cumulative Impacts (if applicable)**
4.2	Aesthetics	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to significant cumulative construction or operational aesthetic impacts.
4.3	Air Quality and Greenhouse Gas	LSM: The Proposed Modifications would potentially make a considerable contribution to significant cumulative regional emissions of PM_{10}; however, with implementation of Mitigation Measure AQ-1, the impact would be reduced to less than significant.
4.4	Biological Resources: Fisheries	NI: The Proposed Modifications would make no contribution to a cumulative impact on fishery biological resources.
4.5	Biological Resources: Terrestrial	LS: The Proposed Modifications would not cause the Project to make a considerable contribution to significant cumulative impacts to terrestrial biological resources.
4.6	Cultural and Paleontological Resources	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative construction or operational cultural resources impacts.
4.7	Energy	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to a cumulative impact to energy resources.
4.8	Geology, Soils, and Seismicity	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to construction or operational cumulative geology, seismicity or soils impacts.
4.9	Hazards and Hazardous Materials	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to construction or operational cumulative impacts related to hazards or hazardous materials.
4.10	Hydrology/Water Quality: Groundwater	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative impacts to hydrology and water quality of groundwater resources.
4.11	Hydrology/Water Quality: Surface Water: Inland Surface Waters	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative construction or operational impacts to hydrology or water quality of inland surface waters.
4.11	Hydrology/Water Quality: Surface Water: Marine Surface Waters	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative construction or operational impacts to hydrology or water quality of marine waters.
4.12	Land Use	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to a cumulative land use impact.
4.13	Marine Biological Resources	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative impacts to marine biological resources.
4.14	Noise and Vibration	LS: The Project Modifications would not cause the Project to make a cumulatively considerable contribution to construction or operational cumulative noise and vibration impacts.
4.15	Population and Housing	LS: The Proposed Modifications would not cause the Project to make a considerable contribution to significant cumulative impacts related to population and housing
4.16	Public Services, Recreation, and Utilities	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to cumulative impacts related to schools, parks, recreational facilities or other public services and utilities (fire and police protection, solid waste).
4.17	Traffic and Transportation	LS: The Proposed Modifications would not cause the Project to make a cumulatively considerable contribution to significant cumulative traffic and transportation impact.
4.18	Water Supply and Wastewater Systems	LS: The Proposed Modifications would not cause the project as a whole to contribute to a new significant cumulative impact or substantially increase the severity of the project's contribution to a significant cumulative impact on water supply or wastewater system

Appendix C. Mitigation Monitoring and Reporting Program for the Expanded AWPF

Appendix C.
Mitigation Monitoring and Reporting Program for the Advanced Water Purification Facility Expansion

Section 21081.6 of the California Public Resources Code and Section 15091(d) and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines require public agencies "to adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This MMRP is based on the mitigation measures included in the Final Supplemental Environmental Impact Report for the Proposed Modifications (Final SEIR). This MMRP includes only the mitigation measures, monitoring and reporting requirements identified in the Final SEIR for the components to be constructed as part of the Advanced Water Purification Facility (AWPF) Expansion component of the expanded Pure Water Monterey Groundwater Replenishment Project (the "expanded PWM Project"). Acronyms are defined in the Draft Supplemental EIR on pages x through xi found at www.purewatermonterey.org.

Mitigation Measures, Timing and Responsibility for Monitoring

Mitigation Measures (all requirements described shall be Contractor's responsibility unless otherwise noted)	**Timing of Implementation & Monitoring**	**Responsibility for Compliance Monitoring**
Mitigation Measure AQ-1: **Construction Fugitive Dust Control.** The following standard Dust Control Measures shall be implemented during construction to help prevent potential nuisances to nearby receptors due to fugitive dust and to reduce contributions to exceedances of the state ambient air quality standards for PM_{10}, in accordance with MBARD's CEQA Guidelines. a. Water all active construction areas as required with non-potable sources to the extent feasible; frequency should be based on the type of operation, soil, and wind exposure and minimized to prevent wasteful use of water. b. Prohibit grading activities during periods of high wind (over 15 mph). c. Cover all trucks hauling soil, sand, and other loose materials and require trucks to maintain at least 2 feet of freeboard. d. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. e. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. f. Enclose, cover, or water daily exposed stockpiles (dirt, sand, etc.). g. Replant vegetation in accordance with M1W-approved specifications in disturbed areas as quickly as possible. h. Wheel washers shall be installed and used by truck operators at the exits of the construction sites s. i. Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District (MBARD) shall also be visible to ensure compliance with MBARD rules. j. Per MBARD recommendations, when feasible, the project shall use construction equipment that conforms to ARB's Tier 3 or Tier 4 emission standards or construction equipment that uses alternative fuels such as compressed natural gas (CNG), propane, electricity or biodiesel to reduce diesel exhaust emissions.	During project construction	M1W Construction Manager and MBARD

Mitigation Measures (all requirements described shall be Contractor's responsibility unless otherwise noted)	Timing of Implementation & Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure CR-2b: **Discovery of Archaeological Resources or Human Remains.** If archaeological resources or human remains are unexpectedly discovered during any construction, work shall be halted within 50 meters (±160 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, an archaeologist shall inspect the find within 24 hours of discovery. The archaeologist, in consultation with the project proponent and the appropriate Native American Representative, determine whether preservation in place is feasible. Consistent with CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is determined to be infeasible, a qualified archaeologist, in consultation with M1W and the appropriate Native American Representative, shall prepare and implement an Archaeological Research Design and Treatment Plan (ARDTP). Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2 and be implemented with the oversight and concurrence of the Lead Agency. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The ARDTP shall include provisions for analysis of data in a regional context, reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative before being finalized, curation of artifacts and data at a local facility acceptable to the appropriate Native American representative, and dissemination of final confidential reports to the appropriate Native American representative, the Northwest Information Center of the California Historical Resources Information System, the Lead Agency and interested professionals. The County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code Sec. 5097 if the remains are determined to be of Native American origin.	During project construction	M1W Construction Manager and qualified archaeologist
Mitigation Measure CR-2c: **Native American Notification** Because of their continuing interest in potential discoveries during construction, all listed Native American Contacts shall be notified of any and all discoveries of archaeological resources in the project area. If needed, M1W will assist Contractor to complete this requirement.	During project construction	M1W Construction Manager & if applicable, qualified archaeologist

Mitigation Measures (all requirements described shall be Contractor's responsibility unless otherwise noted)	Timing of Implementation & Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure EN-1: **Construction Equipment Efficiency Plan.** A qualified professional (i.e., construction manager, planner or energy efficiency consultant) shall prepare a Construction Equipment Efficiency Plan that identifies the specific measures that the Contractor shall implement as part of project construction to increase the efficient use of construction equipment. Such measures shall include, but not necessarily be limited to: procedures to ensure that all construction equipment is properly tuned and maintained at all times; a commitment to utilize existing electricity sources where feasible rather than portable diesel-powered generators; consistent compliance with idling restrictions of the State; and identification of procedures (including the use of routing plans for haul trips) that will be followed to ensure that all materials and debris hauling is conducted in a fuel-efficient manner. Compliance with reduction of heavy equipment idling onsite to a maximum of 5 minutes per the California Air Resources Board requirement on Heavy Duty Diesel Vehicles shall be enforced by on-site construction monitors. More specifically, the plan will conform to Per California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, which limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Grading plans shall reference this requirement and a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling. The plan (including the use of routing plans for haul trips) shall be submitted to M1W at least 20 days prior to the beginning of construction activities.	Prior to project construction	M1W Construction Manager
Mitigation Measure PS-3: **Construction Waste Reduction and Recycling Plan**. The construction Contractor shall prepare and implement a construction waste reduction and recycling plan identifying the types of construction debris generated and the manner in which those waste streams will be handled. In accordance with the California Integrated Waste Management Act of 1989, the plan shall emphasize source reduction measures, followed by recycling and composting methods, to ensure that construction and demolition waste generated is managed consistent with applicable statutes and regulations. In accordance with the California Green Building Standards Code and local regulations, the plan shall specify that all trees, stumps, rocks, and associated vegetation and soils, and 50% of all other nonhazardous construction and demolition waste, be diverted from landfill disposal. The plan shall be prepared in coordination with the Monterey Regional Waste Management District and be consistent with Monterey County's Integrated Waste Management Plan. Upon project completion, M1W Construction Manager shall collect the receipts from the contractor(s) to document that the waste reduction, recycling, and diversion goals have been met.	Prior to, during, and after project construction	M1W Construction Manager
Mitigation Measure TR-3: **Roadway Rehabilitation Program.** Prior to commencing project construction, Contractor shall detail (high resolution video and photography) the preconstruction condition of all local construction access and haul routes proposed for substantial use by project-related construction vehicles, including Contractor and its vendors and subcontractors. *For the AWPF Expansion Project, this includes Charlie Benson Road, the driveway to the Regional Treatment Plant gate and all roadways to and from the Work site.* After construction is completed, the same roads shall be surveyed again to determine whether excessive wear and tear or construction damage has occurred. Roads damaged by project-related construction vehicles shall be repaired to a structural condition equal to, or greater than, that which existed prior to construction activities.	Prior to project construction, after project construction	M1W Construction Manager

Appendix D. Mitigation Monitoring and Reporting Program for the Expanded Injection Well Facilities

Appendix D.
Mitigation Monitoring and Reporting Program for the Injection Well Facilities (Phase 4) Project

Section 21081.6 of the California Public Resources Code and Section 15091(d) and Section 15097 of the California Environmental Quality Act (CEQA) Guidelines require public agencies "to adopt a reporting or monitoring program for changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This MMRP is based on the mitigation measures included in the Final Supplemental Environmental Impact Report for the Proposed Modifications (Final SEIR). This MMRP includes only the mitigation measures, monitoring and reporting requirements identified in the Final SEIR for the components to be constructed as part of the Advanced Water Purification Facility (AWPF) Expansion component of the expanded Pure Water Monterey Groundwater Replenishment Project (the "expanded PWM Project"). Acronyms are defined in the Draft Supplemental EIR on pages x through xi found at www.purewatermonterey.org.

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure AE-4: **Exterior Lighting Minimization.** To prevent exterior lighting from affecting nighttime views, the design and operation of lighting at the Injection Well Facilities, shall adhere to the following requirements: • Use of low-intensity street lighting and low-intensity exterior lighting shall be required. • Lighting fixtures shall be cast downward and shielded to prevent light from spilling onto adjacent offsite uses. • Lighting fixtures shall be designed and placed to minimize glare that could affect users of adjacent properties, buildings, and roadways. • Fixtures and standards shall conform to state and local safety and illumination requirements.	Prior to City of Seaside issuance of grading and easements/ ROW permits	M1W project engineers and **Contractor**	During project operation	M1W; Cities of Seaside (public works directors)
Mitigation Measure AQ-1: **Construction Fugitive Dust Control Plan.** The following standard Dust Control Measures shall be implemented during construction to help prevent potential nuisances to nearby receptors due to fugitive dust and to reduce contributions to exceedances of the state ambient air quality standards for PM_{10}, in accordance with MBARD's CEQA Guidelines. a. Water all active construction areas as required with non-potable sources to the extent feasible; frequency should be based on the type of operation, soil, and wind exposure and minimized to prevent wasteful use of water. b. Prohibit grading activities during periods of high wind (over 15 mph). c. Cover all trucks hauling soil, sand, and other loose materials and require trucks to maintain at least 2 feet of freeboard. d. Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. e. Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets. f. Enclose, cover, or water daily exposed stockpiles (dirt, sand, etc.). g. Replant vegetation in disturbed areas as quickly as possible. h. Wheel washers shall be installed and used by truck operators at the exits of the construction sites to the Advanced Water Purification Facility site, and the Injection Well Facilities. i. Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the MBARD shall also be visible to ensure compliance with MBARD rules. j. Per Monterey Bay Air Resources District recommendations, when feasible, the project shall use construction and tree remover equipment that conforms to ARB's Tier 3 or Tier 4 emission standards or construction equipment that uses alternative fuels such as compressed natural gas (CNG), propane, electricity or biodiesel to reduce diesel exhaust emissions.	During project construction	M1W, CalAm project engineers and **Contractor**	During project construction	M1W, CalAm, and MBARD

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1a: Implement Construction Best Management Practices. The following best management practices shall be implemented during all identified phases of construction (i.e., pre-, during, and post-) to reduce impacts to special-status plant and wildlife species: 1. A qualified biologist must conduct an Employee Education Program for the construction crew prior to any construction activities. A qualified biologist must meet with the construction crew at the onset of construction at the site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which would ensure the safety of the monitor during such activities, 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the USFWS and CDFW; and 6) the proper procedures if a special-status species is encountered within the site. 2. Trees and vegetation not planned for removal or trimming shall be protected prior to and during construction to the maximum extent possible through the use of exclusionary fencing, such as hay bales for herbaceous and shrubby vegetation, and protective wood barriers for trees. Only certified weed-free straw shall be used, to avoid the introduction of non-native, invasive species. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact. 3. Protective fencing shall be placed prior to and during construction to keep construction equipment and personnel from impacting vegetation outside of work limits. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact. 4. Following construction, disturbed areas shall be restored to pre-construction contours to the maximum extent possible and revegetated using locally-occurring native species and native erosion control seed mix, per the recommendations of a qualified biologist. 5. Grading, excavating, and other activities that involve substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation (pre-, during, and post-construction). 6. No firearms shall be allowed on the construction sites at any time. 7. All food-related and other trash shall be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel shall not feed or otherwise attract wildlife to the area. 8. To protect against spills and fluids leaking from equipment, the project proponent shall require that the **Contractor** maintains an on-site spill plan and on-site spill containment measures that can be easily accessed. 9. Refueling or maintaining vehicles and equipment should only occur within a specified staging area that is at least 100 feet from a waterbody (including riparian and wetland habitat) and that has sufficient management measures that will prevent fluids or other construction materials including water from being transported into waters of the state. Measures shall include confined concrete washout areas, straw wattles placed around stockpiled materials and plastic sheets to cover materials from becoming airborne or otherwise transported due to wind or rain into surface waters. 10. The project proponent and/or its **Contractor**s shall coordinate with the City of Seaside on the location the Expanded Injection Well Area and the removal of sensitive biotic material.	Prior to, during and after project construction	**Contractor** and M1W Construction Manager (qualified biologist)	Prior to and during project construction	M1W, CalAm, qualified biologist and construction biological monitor; City of Seaside for Injection Well Facilities
Mitigation Measure BT-1b: Implement Construction-Phase Monitoring. The project proponents shall retain a qualified biologist to monitor all ground disturbing construction activities (i.e., vegetation removal, grading, excavation, or similar activities) to protect any special-status species encountered. Any handling and relocation protocols of special-status wildlife species shall be determined in coordination with CDFW prior to any ground disturbing activities and conducted by a qualified biologist with appropriate scientific collection permit. After ground disturbing project activities are complete, the qualified biologist shall train an individual from the construction crew to act as the on-site construction biological monitor. The construction biological monitor shall be the contact for any special status wildlife species encounters, shall conduct daily inspections of equipment and materials stored on site and any holes or trenches prior to the commencement of work, and shall ensure that all installed fencing stays in place throughout the construction period. The qualified biologist shall then conduct regular scheduled and unscheduled visits to ensure the construction biological monitor is satisfactorily implementing all appropriate mitigation protocols. Both the qualified biologist and the construction biological monitor shall have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The qualified biologist and the construction monitor shall complete a daily log summarizing activities and environmental compliance throughout the duration of the project. The log shall also include any special-status wildlife species observed and relocated.	Prior to and during project construction	M1W Construction Manager (qualified biologist)	Prior to and during project construction	M1W Construction Manager (qualified biologist); CDFW
Mitigation Measure BT-1c: Implement Non-Native, Invasive Species Controls. The following measures shall be implemented to reduce the introduction and spread of non-native, invasive species: 1. Any landscaping or replanting required for the project shall not use species listed as noxious by the California Department of Food and Agriculture (CDFA). 2. Bare and disturbed soil shall be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the Biological Study Area. 3. Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site. 4. All non-native, invasive plant species shall be removed from disturbed areas prior to replanting.	During project construction	**Contactor**	During project construction	M1W qualified biologist and construction biological monitor

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1d: Conduct Pre-Construction Surveys for California Legless Lizard. The project proponents shall retain a qualified biologist to prepare and implement a legless lizard management plan in coordination with CDFW, which shall include, but is not limited to, the protocols for pre-construction surveys, construction monitoring, and salvage and relocation. The management plan shall include, but is not limited to, the following: • Pre-Construction Surveys. Pre-construction surveys for legless lizards shall be conducted in all suitable habitat proposed for construction, ground disturbance, or staging. The qualified biologist shall hold or obtain a CDFW scientific collection permit for this species. The pre-construction surveys shall use a method called "high-grading." The high grading method shall include surveying the habitat where legless lizards are most likely to be found, and the survey must occur under the conditions when legless lizards are most likely to be seen and captured (early morning, high soil moisture, overcast, etc.). The intensity of a continued search may then be adjusted, based on the results of the first survey in the best habitat. • A "three pass method" shall be used to locate and remove as many legless lizards as possible. A first pass shall locate as many legless lizards as possible, a second pass should locate fewer lizards than the first pass, and a third pass should locate fewer lizards than the second pass. All search passes shall be conducted in the early morning when legless lizards are easiest to capture. Vegetation may be removed by hand to facilitate hand raking and search efforts for legless lizards in the soil under brush. If lizards are found during the first pass, an overnight period of no soil disturbance must occur before the second pass, and the same requirement shall be implemented after the second pass. If no lizards are found during the second pass, a third pass is not required. Installation of a barrier, in accordance with the three-pass method, shall be required if legless lizards are found at the limits of construction (project boundaries) and sufficient soft sand and vegetative cover are present to suspect additional lizards are in the immediate vicinity on the adjacent property. A barrier shall prevent movement of legless lizards into the property. All lizards discovered shall be handled according to the salvage procedures outlined below. • Construction Monitoring. Monitoring by a qualified biologist shall be ongoing during construction. The onsite monitor shall be present during all ground-disturbing construction activities. To facilitate the careful search for lizards during construction, vegetation may need to be removed. If removal by hand is impractical, equipment such as a chainsaw, string trimmer, or skid-steer may be used, if a monitor and crew are present. The task of the vegetation removal is to remove plants under the direction of the monitor, allowing the monitor to watch for legless lizards. After plants are removed, the monitor and crew shall search the exposed area for legless lizards. If legless lizards are found during pre-construction surveys or construction monitoring, the protocols for salvage and relocation identified below shall be followed. Upon completion of pre-construction surveys, construction monitoring, and any resulting salvage and relocation actions, a report shall be submitted to the CDFW. The CDFW must be notified at least 48 hours before any field activity begins. • Salvage and Relocation. Only experienced persons may capture or handle legless lizards. The monitor must demonstrate a basic understanding, knowledge, skill, and experience with this species and its habitat. Once captured, a lizard shall be placed in a lidded, vented box containing clean sand. Areas of moist and dry sand need to be present in the box. The boxes must be kept out of direct sunlight and protected from temperatures over 72°F. The sand must be kept at temperatures under 66°F. Ideal temperatures are closer to 60°F. On the same day as capture, the lizards shall be examined for injury and data recorded on location where found as well as length, color, age, and tail condition. Once data is recorded, lizards shall be relocated to appropriate habitat, as determined through coordination with the CDFW, qualified biologist, and potential landowners. • Suitability of habitat for lizard release must be evaluated and presented in a management plan. The habitat must contain habitat factors most important to the health and survival of the species such as appropriate habitat based on soils, vegetated cover, native plant species providing cover, plant litter layer and depth, soil and ambient temperature, quality and composition of invertebrate population and prey availability. Potential relocation sites that contain the necessary conditions may exist within the habitat reserves on the former Fort Ord, including the Fort Ord National Monument. Lizards shall be marked with a unique tag (pit or tattoo) prior to release. Release for every lizard shall be recorded with GPS. GPS locations shall be submitted as part of the survey result report to document the number and locations of lizards relocated.	Prior to and during project construction	M1W Construction Manager (qualified biologist)	Prior to and during project construction	M1W Construction Manager (qualified biologist)

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1f: Conduct Pre-Construction Protocol-Level Botanical Surveys within the remaining portion of the Biological Study Area. The project proponents shall retain a qualified biologist to conduct protocol-level surveys for special-status plant species within the Biological Study Area not yet surveyed. Protocol-level surveys shall be conducted by a qualified biologist at the appropriate time of year for species with the potential to occur within the site. A report describing the results of the surveys shall be provided to the project proponents prior to any ground disturbing activities. The report shall include but is not limited to 1) a description of the species observed, if any; 2) map of the location, if observed; and 3) recommended avoidance and minimization measures, if applicable. The avoidance and minimization measures shall include, but are not limited to, the following: • Impacts to species individuals shall be avoided through project design and modification, to the extent feasible while taking into consideration other site and engineering constraints. • If impacts to State listed plant species cannot be avoided, the project proponents shall comply with the CESA and consult with the CDFW to determine whether authorization for the incidental take of the species is required prior to commencing construction. If it is determined that authorization for incidental take is required from the CDFW, the project proponents shall comply with the CESA to obtain an incidental take permit prior to commencing construction on the site upon which State listed plant species could be taken. Permit requirements typically involve preparation and implementation of a mitigation plan and mitigating impacted habitat at a 3:1 ratio through preservation and/or restoration. At a minimum, the impacted plant species shall be replaced at a 1:1 ratio through preservation and/or restoration, as described below. The project proponents shall retain a qualified biologist to prepare a mitigation plan, which shall include, but is not limited to identifying; avoidance and minimization measures; mitigation strategy, including a take assessment, avoidance and minimization measures, compensatory mitigation lands, and success criteria; and funding assurances. The project proponents shall be required to implement the approved plan and any additional permit requirements. • If impacts to non-State listed, special-status plant species cannot be avoided, the species shall be replaced at a 1:1 ratio for acreage and/or individuals impacted through preservation, restoration, or combination of both. A Rare Plant Restoration Plan (see attached draft Rare Plant Restoration Plan which may be modified by addendum during the bid process or by change order during the contract), approved by the project proponents prior to commencing of construction on the site upon which the rare plant would be impacted, shall be prepared and implemented by a qualified biologist. The plan shall include, but is not limited to, the following: • A detailed description of on-site and/or off-site mitigation areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, including, if appropriate, increased planting ratio to ensure the applicable success ratio. Specifically, seed shall be collected from the on-site individuals that will be impacted and grown in a local greenhouse, and then transplanted within the mitigation area. Plants shall be transplanted while they are young seedlings in order to develop a good root system. Alternatively, the mitigation area may be broadcast seeded in fall; however, if this method is used, some seed shall be retained in the event that the seeding fails to produce viable plants and contingency measures need to be employed. • A description of a three-year monitoring program, including specific methods of vegetation monitoring, data collection and analysis, restoration goals and objectives, success criteria, adaptive management if the criteria are not met, reporting protocols, and a funding mechanism. • The mitigation area shall be preserved in perpetuity through a conservation easement or other legally enforceable land preservation agreement. Exclusionary fencing shall be installed around the mitigation area to prevent disturbance until success criteria have been met.	Prior to project construction	**Contractor** shall comply with all requirements in the Rare Plan Restoration Plan (as applicable to Work on the project site).	During construction and 3 years following completion of construction	M1W Construction Manager (qualified biologist)
Mitigation Measure BT-1h: Implementation of Mitigation Measures BT-1a and BT-1b to Mitigate Impacts to the Monterey Ornate Shrew, Coast Horned Lizard, Coast Range Newt, Two-Striped Garter Snake, and Salinas Harvest Mouse. If these species are encountered, implementation of Mitigation Measures BT-1a and BT-1b, which avoid and minimize impacts through implementing construction best management practices and monitoring, would reduce potential impacts to these species to a less-than-significant level.	Prior to and during project construction	**Contractor** and qualified biologists	Prior to and during project construction	M1W Construction Manager (qualified biologist)

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1i: Conduct Pre-Construction Surveys for Monterey Dusky- Footed Woodrat. To avoid and reduce impacts to the Monterey dusky-footed woodrat, the project proponents shall retain a qualified biologist to conduct pre-construction surveys in suitable habitat proposed for construction, ground disturbance, or staging within three days prior to construction for woodrat nests within the project area and in a buffer zone 100 feet out from the limit of disturbance. All woodrat nests shall be flagged for avoidance of direct construction impacts and protection during construction, where feasible. Nests that cannot be avoided shall be manually deconstructed prior to land clearing activities to allow animals to escape harm. If a litter of young is found or suspected, nest material shall be replaced, and the nest left alone for two to three weeks before a re-check to verify that young are capable of independent survival before proceeding with nest dismantling. The following specific requirements of MPWSP Final EIR/EIS (MMs 4.6-1k) shall also be required. If woodrat nests are found during the preconstruction surveys, the wildlife biologist shall conduct additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests. If nests are observed outside of the construction area, the qualified biologist shall demarcate a minimum 50-foot buffer area with orange construction fencing and require that all construction activities and disturbance remain outside of the fencing. Active woodrat nests located within the anticipated construction disturbance areas shall be relocated. Nests shall be relocated outside of the peak breeding season, (peak breeding season is typically February through November) to minimize disturbance to young woodrats. Protocol for relocation of woodrats and/or their nests by qualified biologists shall be followed, as described below: a. Clear understory vegetation from around the nest using hand tools. b. After all vegetative cover has been cleared around the nest, the biologist shall gently disturb the nest to encourage the woodrat(s) to abandon the nest and seek cover in adjacent habitat. c. Once the woodrats have left the nest, the biologist shall carefully relocate the nest sticks to suitable habitat outside of the construction disturbance area, piling the sticks at the base of trees or large shrubs if available. If multiple nests are relocated, the stick piles shall be placed at least 25 feet from one another. d. The qualified biologist shall ensure potential health hazards to the biologists moving nests are addressed to minimize the risk of contracting diseases associated with woodrats and woodrat nests. e. If young are encountered during dismantling of the nest, nest material shall be replaced and a 50-foot no- disturbance buffer shall be established around the active nest. The buffer shall remain in place until young have matured enough to disperse on their own accord and the nest is no longer active. Nesting substrate shall then be collected and relocated to suitable oak woodland habitat outside of the project area.	Prior to project construction	**Contractor** and M1W Construction Manager (qualified biologist)	Prior to project construction	M1W Construction Manager (qualified biologist)

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1j: Conduct Pre-Construction Surveys for American Badger. To avoid and reduce impacts to the American badger, the project proponents shall retain a qualified biologist to conduct focused pre-construction surveys for badger dens in all suitable habitat proposed for construction, ground disturbance, or staging no more than two weeks prior to construction. Surveys shall be conducted wherever suitable habitat exist within 100 feet of the project area boundary. Vegetation communities in the project area include non-native grasslands. Along pipeline alignments, surveys shall be phased to occur within 14 days prior to disturbance along that portion of the alignment. Game cameras shall be used to record any movements at potentially active dens for no less than three (3) nights. If no potential badger dens are present, no further mitigation is required. If potential dens are observed, the following measures are required to avoid potential significant impacts to the American badger: 1. If the qualified biologist determines that potential dens are inactive, the biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction. 2. If the qualified biologist determines that potential dens may be active, the den shall be monitored for a period sufficient (as determined by a qualified biologist) to determine if the den is a maternity den occupied by a female and her young, or if the den is occupied by a solitary badger. 3. Maternity dens occupied by a female and her young shall be avoided during construction and a minimum buffer of 200 feet in which no construction activities shall occur shall be maintained around the den. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction. 4. Solitary male or female badgers shall be passively relocated by blocking the entrances of the dens with soil, sticks, and debris for three to five days to discourage the use of these dens prior to project construction disturbance. The den entrances shall be blocked to an incrementally greater degree over the three to five-day period. After the qualified biologist determines that badgers have stopped using active dens within the project boundary, the dens shall be hand-excavated with a shovel to prevent re-use during construction. The following applicable requirements of MPWSP Final EIR/EIS (MM 4.6-1j), Item 6, shall also be required. If active badger dens are found during the course of preconstruction surveys, the following measures shall be taken to avoid and minimize adverse effects on American badger: a. Relocation shall be prohibited during the badger pupping season (typically February 15 to June 1). b. Construction activities shall not occur within 50 feet of active badger dens observed outside of the project area. c. The qualified biologist shall contact CDFW immediately if natal badger dens are detected. The 200-foot buffer area identified in 3) above, may be reduced, if approved by CDFW, and if construction would not alter the behavior of the adult or young in a way that would cause injury or death to those individuals. d. If the biologist determines that potential dens within the project area, and outside the breeding season, may be active, the biologist shall notify the CDFW.	Prior to project construction	**Contractor** and qualified biologists	Prior to project construction	M1W Construction Manager (qualified biologist)
Mitigation Measure BT-1k: Conduct Pre-Construction Surveys for Protected Avian Species, including, but not limited to, white-tailed kite and California horned lark. Prior to the start of construction activities at each project component site, a qualified biologist shall conduct pre-construction surveys for active nests. Pre-construction surveys shall be conducted no more than 10 days prior to the start of ground disturbance to maximize the probability that nests that could potentially be impacted are detected. Surveys shall cover a sufficient area around the work site to identify nests and determine their status. A sufficient area means any area potentially affected (including direct impacts (i.e., nest destruction), noise, vibration, and movement of workers or equipment) by the project. 1. No preconstruction surveys or avoidance measures are required for construction activities that would be completed entirely during the non-nesting season (September 16 to January 31). 2. For all construction activities scheduled to occur during the nesting season (February 1 to September 15), the qualified biologist shall conduct a preconstruction avian nesting survey no more than 10 days prior to the start of staging, site clearing, and/or ground disturbance. 3. Because some bird species nest early in spring and others nest later in summer, surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans. 4. If there is a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey shall be conducted before reinitiating construction. 5. The qualified biologist shall be capable of determining the species and nesting stage without causing intrusive disturbance. The surveys shall cover all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds. 6. If active nests are found in the project area or vicinity (500 feet for raptors and 300 feet for other birds), the nests shall be continuously surveyed for the first 24 hours prior to any construction related activities to establish a behavioral baseline and, once work commences, all nests shall be continuously monitored to detect any behavioral changes as a result of the project, if feasible. If behavioral changes are observed, . avoidance and minimization measures shall be applied to ensure that the construction activities do not cause the adult to abandon an active nest or young or change an adult's behavior so it could not care for an active nest or young. If continuous monitoring is not feasible, a no-disturbance buffer (at least 500 feet for raptors and 250 feet for other birds [or as otherwise determined in consultation with CDFW] shall be created around the active nests). These buffers will remain in place until the breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival. If the nest(s) are found in an area where ground disturbance is scheduled to occur, the project operator shall require that ground disturbance be delayed until after the birds have fledged. The buffer distance can be reduced with authorization from CDFW if construction activities would not cause an adult to abandon an active nest or young or change an adult's behavior so it could not care for an active nest or young.	Prior to project construction and if found establish and comply with no-disturbance buffer	**Contractor**s, and M1W Construction Manager (qualified biologist)	Prior to project construction	M1W Construction Manager (qualified biologist), and USFWS

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure BT-1m: Minimize Effects of Nighttime Construction Lighting. Nighttime construction lighting shall be focused and downward directed to preclude night illumination of the adjacent open space area.	During project construction	M1W Construction Manager and **Contractor**	During project construction	M1W Construction Manager
Mitigation Measure BT-4. **Fort Ord HMP Plant Species Salvage.** For impacts to the Fort Ord HMP plant species within the Biological Study Area that do not require take authorization from USFWS or CDFW, salvage efforts for these species shall be evaluated by a qualified biologist per the requirements of the Fort Ord HMP and Biological Opinion. A salvage plan shall be prepared and implemented by a qualified biologist, which shall include, but is not limited to: a description and evaluation of salvage opportunities and constraints; a description of the appropriate methods and protocols of salvage and relocation efforts; identification of relocation and restoration areas; and identification of qualified biologists approved to perform the salvage efforts, including the identification of any required collection permits from USFWS and/or CDFW. Where proposed, seed collection shall occur from plants within the Biological Study Area and topsoil shall be salvaged within occupied areas to be disturbed. Seeds shall be collected during the appropriate time of year for each species by qualified biologists. At the time of seed collection, a map shall also be prepared that identifies the specific locations of the plants for any future topsoil preservation efforts. The collected seeds shall be used to revegetate temporarily disturbed construction areas and reseeding and restoration efforts on- or off-site, as determined appropriate in the salvage plan.	Prior to, during, and after construction	M1W Construction Manager (qualified biologist)	During, and after construction	M1W Construction Manager (qualified biologist)
Mitigation Measure CR-2b: **Discovery of Archaeological Resources or Human Remains.** If archaeological resources or human remains are unexpectedly discovered during any construction, work shall be halted within 50 meters (±160 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, an archaeologist shall inspect the find within 24 hours of discovery. The archaeologist, in consultation with the project proponent and the appropriate Native American Representative, determine whether preservation in place is feasible. Consistent with CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is determined to be infeasible, a qualified archaeologist, in consultation with M1W and the appropriate Native American Representative, shall prepare and implement an Archaeological Research Design and Treatment Plan (ARDTP). Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2 and be implemented with the oversight and concurrence of the Lead Agency. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The ARDTP shall include provisions for analysis of data in a regional context, reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative before being finalized, curation of artifacts and data at a local facility acceptable to the appropriate Native American representative, and dissemination of final confidential reports to the appropriate Native American representative, the Northwest Information Center of the California Historical Resources Information System, the Lead Agency and interested professionals. The County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code Sec. 5097 if the remains are determined to be of Native American origin.	During project construction	**Contractor** And M1W Construction Manager, and qualified archaeologists	During project construction	M1W Construction Manager and qualified archaeologist
Mitigation Measure CR-2c: **Native American Notification** Because of their continuing interest in potential discoveries during construction, all listed Native American Contacts shall be notified of any and all discoveries of archaeological resources in the project area.	During project construction	M1W, CalAm and qualified archaeologist	During project construction	M1W, CalAm and qualified archaeologist
Mitigation Measure EN-1: **Construction Equipment Efficiency Plan.** M1W (for all components) shall contract with a qualified professional (i.e., construction manager, planner or energy efficiency consultant) to prepare a Construction Equipment Efficiency Plan that identifies the specific measures that M1W (and its **Contractor**) will implement as part of project construction to increase the efficient use of construction equipment. Such measures shall include, but not necessarily be limited to: procedures to ensure that all construction equipment is properly tuned and maintained at all times; a commitment to utilize existing electricity sources where feasible rather than portable diesel-powered generators; consistent compliance with idling restrictions of the State; and identification of procedures (including the use of routing plans for haul trips) that will be followed to ensure that all materials and debris hauling is conducted in a fuel-efficient manner. Compliance with reduction of heavy equipment idling onsite to a maximum of 5 minutes per the California Air Resources Board requirement on Heavy Duty Diesel Vehicles shall be enforced by on-site construction monitors. More specifically, the plan will conform to Per California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, which limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Grading plans shall reference this requirement and a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling. The plan (including the use of routing plans for haul trips) shall be submitted to the permitting agency and/or lead agency (M1W or local jurisdictions responsible for individual permits) at least 20 days prior to the beginning of construction activities.	Prior to project construction	M1W. energy efficiency expert, **Contractor**	During project construction	M1W Construction Manager and qualified archaeologist
Mitigation Measure NV-1a: Drilling Contractor Noise Measures. Contractor specifications shall include a requirement that drill rigs located within 700 feet of noise-sensitive receptors shall be equipped with noise reducing engine housings or other noise reducing technology and the line of sight between the drill rig and nearby sensitive receptors shall be blocked by portable acoustic barriers and/or shields to reduce noise levels such that drill rig noise levels are no more 75 dBA at 50 feet. This would reduce the nighttime noise level to less than 60 dBA Leq at the nearest residence. The **Contractor** shall submit to the M1W and the Seaside Building Official, a "Well Construction Noise Control Plan" for review and approval. The plan shall identify all feasible noise control procedures that would be implemented during night-time construction activities. At a minimum, the plan shall specify the noise control treatments to achieve the specified above noise performance standard.	Prior to and during project construction	**Contractor**s	During project construction	M1W, Seaside building official

Mitigation Measures	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring
Mitigation Measure NV-1c: **Neighborhood Notice**. Residences and other sensitive receptors within 900 feet of a nighttime construction area shall be notified of the construction location and schedule in writing, at least two weeks prior to the commencement of construction activities. The notice shall also be posted along the proposed pipeline alignments, near the proposed facility sites, and at nearby recreational facilities. The **Contractor** shall designate a noise disturbance coordinator who would be responsible for responding to complaints regarding construction noise. The coordinator shall determine the cause of the complaint and ensure that reasonable measures are implemented to correct the problem. A contact number for the noise disturbance coordinator shall be conspicuously placed on construction site fences and included in the construction schedule notification sent to nearby residences.	Prior to project construction	M1W Construction Manager, **Contractor to provide look ahead schedule and** noise disturbance coordinator	Prior to project construction	M1W Construction Manager and qualified archaeologist
Mitigation Measure PS-3: **Construction Waste Reduction and Recycling Plan**. The **Contractor**(s) shall prepare and implement a construction waste reduction and recycling plan identifying the types of construction debris generated and the manner in which those waste streams will be handled. In accordance with the California Integrated Waste Management Act of 1989, the plan shall emphasize source reduction measures, followed by recycling and composting methods, to ensure that construction and demolition waste generated is managed consistent with applicable statutes and regulations. In accordance with the California Green Building Standards Code and local regulations, the plan shall specify that all trees, stumps, rocks, and associated vegetation and soils, and 50% of all other nonhazardous construction and demolition waste, be diverted from landfill disposal. The plan shall be prepared in coordination with the Monterey Regional Waste Management District and be consistent with Monterey County's Integrated Waste Management Plan. Upon project completion, M1W and CalAm shall collect the receipts from the **Contractor**(s) to document that the waste reduction, recycling, and diversion goals have been met.	Prior to, during, and after project construction	**Contractor**	Upon project completion	M1W Construction Manager and qualified archaeologist
Mitigation Measure TR-3: **Roadway Rehabilitation Program.** Prior to commencing project construction, M1W and CalAm shall detail the preconstruction condition of all local construction access and haul routes proposed for substantial use by project-related construction vehicles. The construction routes surveyed must be consistent with those identified in the construction traffic control and safety assurance plan developed under Mitigation Measure TR-2. After construction is completed, the same roads shall be surveyed again to determine whether excessive wear and tear or construction damage has occurred. Roads damaged by project-related construction vehicles shall be repaired to a structural condition equal to, or greater than, that which existed prior to construction activities.	Prior to project construction, after project construction	**Contractor**	After project construction	M1W Construction Manager and qualified archaeologist and City of Seaside

Appendix E. Greenhouse Gas and Air Quality Analysis for Proposed Modifications to the Pure Water Monterey Groundwater Replenishment Project (Illingworth & Rodkin, October 2019)

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Technical Memo – Air Quality and GHG

Date: October 23, 2019

To: **Denise Duffy**
Denise Duffy & Associates, Inc.
947 Cass St. Suite 5
Monterey, CA. 93940

From: James A. Reyff
Illingworth & Rodkin, Inc.

RE: Expanded Pure Water Monterey Groundwater Replenishment Project - Monterey County, CA

SUBJECT: Air Quality and Greenhouse Gas Emission Impacts Job#19-142

This memo addresses changes to air quality and greenhouse gas emissions associated with the Expanded Pure Water Monterey Groundwater Replenishment Project.

Introduction

The Expanded Pure Water Monterey Groundwater Replenishment Project (PWM/GWR), proposed by MW1, is an expansion of the capacity of the Approved PWM/GWR Project that is currently under construction. As a back-up to the California American (CalAm) Monterey Peninsula Water Supply Project (MPWSP), the Expanded PWM/GWR Project would increase the amount of purified recycled water produced by the PWM/GWR Project. The PWM/GWR Project's Advanced Water Purification Facility (AWPF) would be expanded from the current 5 million gallons per day (mgd) plant to up to a 7.6 mgd maximum capacity plant. The proposed Expanded PWM/GWR Project also includes associated conveyance, injection and extraction facilities.

The PWM/GWR Project Final EIR (certified October 2015) analyzed the air quality and greenhouse gas emissions from the approved project. The CPUC certified the MPWSP EIR/EIS that included an evaluation of air quality and greenhouse gas emissions on September 13, 2018.

Impacts associated with air quality and greenhouse gas emissions were evaluated as part of the PWM/GWR Final EIR; this study is referred to in this memo as the 2015 Air Quality Study. The

study identified less-than-significant impacts or less-than-significant impacts with mitigation with respect to both construction and operational period air quality and greenhouse gas emissions. The 2015 Air Quality Study identified Mitigation Measure AQ-1 that is assumed to apply to this project:

> *Mitigation Measure AQ-1: Construction Fugitive Dust Control Plan. (Applies to all Project Component Sites where ground disturbance would occur.)*
>
> *The following standard Dust Control Measures shall be implemented during construction to help prevent potential nuisances to nearby receptors due to fugitive dust and to reduce contributions to exceedances of the state ambient air quality standards for PM10, in accordance with MBUAPCD's CEQA Guidelines.*
>
> *a) Water all active construction areas at least twice daily as required with water (preferably from non-potable sources to the extent feasible); frequency should be based on the type of operation, soil, and wind exposure and minimized to prevent wasteful use of water.*
> *b) Prohibit grading activities during periods of high wind (over 15 mph).*
> *c) Cover all trucks hauling soil, sand, and other loose materials and require trucks to maintain at least 2 feet of freeboard.*
> *d) Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites.*
> *e) Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;*
> *f) Enclose, cover, or water daily exposed stockpiles (dirt, sand, etc.);*
> *g) Replant vegetation in disturbed areas as quickly as possible.*
> *h) Wheel washers shall be installed and used by truck operators at the exits of the construction sites to the AWT Facility site and the Injection Well Facilities.*
> i) *Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the*

Many of the PWM/GWR Project components have been constructed. This memo evaluates the potential air quality and greenhouse gas (GHG) emission impacts that could result from the Expanded GWR Project compared to the 2015 project, including temporary impacts during construction and long-term impacts during operation.

Project Description

The Expanded Pure Water Monterey Groundwater Replenishment Project (PWM/GWR), proposed by MW1, is an expansion of the capacity of the Approved PWM/GWR Project that is currently under construction. As a back-up to the California American (CalAm) Monterey Peninsula Water Supply Project (MPWSP), the Expanded PWM/GWR Project would increase the amount of purified recycled water produced by the PWM/GWR Project. The PWM/GWR Project's Advanced Water Purification Facility would be expanded from the current 5 million gallons per day (mgd) plant to up to a 7.6 mgd maximum capacity plant. The proposed Expanded PWM/GWR

Project also includes associated conveyance, injection and extraction facilities. The Expanded PWM/GWR Project would be located within northern Monterey County and would include facilities located within portions of unincorporated Monterey County and the City of Seaside, and near the City of Marina. This proposed project is referred to as the Expanded PWM/GWR Project and includes the following components:

Advanced Water Purification Facility

The AWPF would be expanded to produce up to 7.6 mgd of recycled water. This would require installation of additional treatment and pumping equipment, chemical storage, pipelines and facility appurtenances within the 3.5-acre existing building area. The AWPF would be modified by installing additional equipment. Construction activities would include cutting, laying, and welding pipelines and pipe connections; pouring concrete footings for foundations, tanks, and other support equipment; installing piping, pumps, storage tanks, and electrical equipment; and testing and commissioning facilities. Construction equipment would include excavators, backhoes, graders, pavers, rollers, bulldozers, concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, and generators.

Expanded Injection Well Facilities

The approved PWM/GWR Project included four (4) well sites; however, only two (2) of the four (4) approved well sites were constructed based on final design. The two (2) remaining well sites would be relocated as part of the Proposed Expansion Project. More specifically, the locations for the remaining two (2) deep injection wells have been modified from the location originally planned and described in the PWM/GWR Project Final EIR. In addition, the Proposed Modifications also include the construction of an additional well site. The proposed modifications include an increase in the amount of injection to achieve an additional 2,250 AFY of injections. Construction would be similar to the same methods discussed in the PWM/GWR Project Final EIR, involving: (1) Well construction (drilling, logging and installation), (2) Testing and equipment installation, (3) Back-flush pipeline facilities construction, (4) Percolation basins construction, and (5)Motor control/electrical conveyance construction.

Product Water Conveyance Pipeline

The Product Water Conveyance Pipeline consist of the construction of a new product water conveyance pipeline extending from the existing Blackhorse Reservoir to the Expanded Injection Well area. In total the pipeline would be approximately 1 mile to the first injection well and an additional 1/4 mile from well site #5 to well site #7. The pipeline would be a maximum of 30 inches in diameter. Additional pipeline for back-flushing wells would include up to 2,000 feet of additional pipeline. The pipeline would be constructed using open trench methods that would typically involve clearing and grading the ground surface along the pipeline alignment; excavating the trench; preparing and installing pipeline sections; installing vaults, manhole risers, manifolds, and other pipeline components; backfilling the trench with non-expansive fills; restoring preconstruction contours; and revegetating or paving the pipeline alignments, as appropriate. A conventional backhoe, excavator, or other mechanized equipment would be used to excavate

trenches. The typical trench width would be 6 feet; however, vaults, manhole risers, and other pipeline components could require wider excavations. Some trench widths may be up to 12 feet.

New CalAm Extraction Wells

The Proposed Modifications include a total of four (4) extraction wells; two at the Seaside Middle School Property (Extraction Well #1 and #2) and two near the Fitch Park Community (Extraction Wells #3 and #4), located southeast of the intersection of General Jim Moore Bouvard and Ardennes Circle. All extraction wells would be constructed with associated appurtenances, electrical works, pipeline tie-ins, access road, and other site works including grading and fencing. Construction of the new facilities for the Extraction Wells would occur using the same methods described in the PWM/GWR Project Final EIR.

Extracted raw water from all four new wells would be conveyed in new raw water pipelines using pipelines in General Jim Moore Boulevard for treatment at the site for Extraction Well #3. The treatment at Extraction Well #3 would include a small building that includes raw and treated water pipelines and appurtenances, chemical delivery, storage, metering, and feed/injection systems, SCADA/electrical instrumentation and controls, and safety and climate control equipment. It is anticipated that construction of the new pipelines would occur using open trench construction methods. Where it is not feasible or desirable to perform open-cut trenching, trenchless methods such as jack-and-bore, drill-and-burst, horizontal directional drilling, and/or microtunneling would be employed. Pipeline segments located within heavily congested underground utility areas would likely be installed using horizontal directional drilling or microtunneling. Jack-and-bore methods may also be used for pipeline segments that cross beneath highways, major roadways, or drainages.

Air Quality Attainment Status and Clean Air Plans

Similar to conditions in 2015, the region is in attainment of all National Ambient Air Quality Standards (NAAQS) and is not subject to any air basin-specific State Implementation Plan (SIP) requirements. The region in considered nonattainment for inhalable Particulate matter (PM10) and Nonattainment-Transitional for ozone with respect to the California Ambient Air Quality standards. As a result, the District continues to document progress toward attaining the State ozone standard through updates to the Air Quality Management Plan (AQMP) first prepared in 1991. The 2016 AQMP (MBARD 2017) is the latest triennial update to the plan. The plan indicates that reducing NOx is "crucial for reducing ozone formation" and that projections indicate lower future NOx emissions both in the air basin and in adjacent air basins where transport of ozone is an issue. The plan also identified fewer exceedances of the ozone standard than in the past.

Significance Thresholds

Appendix G of the CEQA Guidelines published by the California Natural Resources Agency was recently updated in 2019. Under these updated guidelines, a project would have a significant air quality impact if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the

project region is non-attainment under an applicable federal or state ambient air quality standard;
c) Expose sensitive receptors to substantial pollutant concentrations;
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people;
e) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
f) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing emissions of greenhouse gas emissions.

The Monterey Air Resources District (MBARD), formally the Monterey Bay Unified Air Pollution Control District or MBUAPCD, provides guidance in assessing air quality impacts related to proposed projects. In 2008, MBARD adopted CEQA Air Quality Guidelines that included thresholds of significance to assist in the review of projects under CEQA. The significance thresholds, all of which except GHG emissions are adopted thresholds of the MBUAPCD and used in this analysis, are summarized in Table1 and are the same thresholds used in the 2015 Air Quality Study.

MBUAPCD had not adopted significance thresholds for GHG emissions. Therefore, the 2015 Air Quality Study used an interim threshold. In February 2013, MBARD staff presented threshold options to the MBARD Board and an analysis of the options evaluated. In February 2014, MBARD staff proposed the following options for operational significance thresholds for land use projects: (1) a bright-line threshold of 2,000 metric tons CO2e per year, (2) incorporation of mitigation measures to reduce GHG emissions by 16%, or (3) compliance with an applicable adopted GHG reduction plan/climate action plan (Monterey Bay Unified Air Pollution Control District, 2014). There are no adopted GHG reduction plans or climate action plans that would apply to the Proposed Expansion Project; therefore, the third option would not be applicable to the Expanded PWM/GWR Project. A threshold of 10,000 metric tons CO2e per year was recommended for stationary source projects that are subject to MBARD permitting requirements; however, the Expanded PWM/GWR Project is not considered a stationary source project so this threshold would not be applicable to this analysis.

The evidence supporting the MBARD staff recommendations in February 2013 and February 2014 is considered by MRWPCA to constitute substantial evidence. Based on the evidence provided by the MBUAPCD staff recommendation, this EIR first considers whether the Proposed Expansion Project's GHG emissions would be below 2,000 MT of CO_2e per year including amortized construction emissions. If the GHG emissions are determined to be above 2,000 MT of CO_2e per year, this analysis would then consider whether GHG emissions have been reduced at least 16% below business as usual emissions due to alternative energy use and energy efficiency measures. If project GHG emissions are below 2,000 MT of CO2e per year, or if GHG emissions have been reduced at least 16% below business as usual emissions, the project would be considered to have less-than-significant GHG emissions.

Table 1 Air Quality Significance Thresholds

Criteria Pollutant, Precursor or Contaminant	Construction Thresholds Maximum Daily Emissions (lbs./day)	Operational Thresholds Average Daily Emissions (lbs./day)
Criteria Air Pollutants		
Volatile organic compound (VOC) or Reactive Organic Gases (ROG)	Not applicable1	137
Nitrogen oxides (NOx)	Not applicable1	137
Carbon monoxide (CO)	Not applicable1	550[2]
Particulate matter with aerodynamic diameter < 10 micrometers (PM10)		82 (on site)[2]
Sulfur dioxide (SO2)	Not applicable1	150
Toxic Air Contaminants		
Increased cancer risk due to exposure to toxic air contaminants	Greater than one incident per 100,000 population	
Greenhouse Gas Emissions		
Quantified GHG Annual Emissions	2,000 metric tons of Co2eq per year or failure to reduce GHG emissions by 16% using alternative energy, energy efficiency, or other GHG reduction measures [3]	

[1]MBUAPCD applies the emission threshold of 137 pounds per day of ROG or NOx to construction activities that involve non-typical equipment (i.e., grinders, and portable equipment). The District specifies examples of typical equipment as scrapers, tractors, dozers, graders, loaders, and rollers (MBUAPCD, 2008; see page 5-3 at: http://mbuapcd.org/pdf/CEQA_full%20%281%29.pdf). For this project, well construction was the only construction activity assumed to use non-typical equipment not normally used in the District (e.g., drilling rigs).
[2] Emissions exceeding these thresholds are considered significant if dispersion modeling shows that the ambient air quality standard for that pollutant would be exceeded. Since air pollutant dispersion modeling was not conducted for this project, the emissions thresholds are used to judge the significance. This threshold applies to stationary sources, not indirect sources.
[3] See discussion above. Based on the substantial evidence developed and presented by the MBUAPCD staff in February 2013 and 2014, MRWPCA, as lead agency for this EIR, has elected to use these thresholds to determine if the Expanded PWM/GWR Project would make a considerable contribution to significant cumulative global climate change impacts. The Expanded PWM/GWR Project would not have any direct, stationary sources of greenhouse gas emissions during operations.

Approach to Analysis

As identified in the 2015 Air Quality Study for the PWM/GWR Final EIR, the primary source of air pollutant emissions associated with the Proposed Expansion Project would be construction activities for the various project components. The California Emissions Estimator Model or CalEEMod is typically used to predict project construction, operational, and greenhouse gas emissions[1] for land use development projects. Since the PWM/GWR Project is not a typical land use project, use of CalEEMod was found to be inappropriate, because the model does not predict fugitive emissions from trenching/pipeline construction and well drilling. Therefore, the analysis in the 2015 Air Quality Study and this assessment used a spreadsheet analysis using project-specific construction assumptions and applying the most appropriate published emissions factors for the different types of emission-generating activities. The different emission factors used in the analysis were specific to the proposed construction equipment, vehicle emissions (worker and

1 CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for lead agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operation from a variety of land use projects.

truck trips), and fugitive dust from ground disturbances. For the purposes of this assessment, ROG were assumed to be equivalent for VOC in accordance with MBUAPCD guidance. Due to the low ambient concentrations of CO, SO_2, and lead in the Air Basin and the low potential for these emissions from the Proposed Expansion Project, these emissions were considered to not have a significant impact during construction and operation of the project.

Construction Analysis

Construction of the Proposed Expansion Project would generate emissions of criteria pollutants (ROG, NO_X, CO, PM_{10}, $PM_{2.5}$) that would result in short-term effects on ambient air quality in the air quality study area and GHGs (primarily CO_2 and CH_4) that would add to the existing global GHG emissions that cause climate change. Emissions would originate from mobile and portable construction equipment exhaust, construction worker vehicle exhaust, dust from ground disturbances, and electrical transmission. Most of these emissions would be temporary (i.e., limited to the construction period) and would cease when construction activities are completed. The Proposed Expansion Project includes the construction of several project components at various locations lasting approximately 24 months, with some activities occurring concurrently. In addition, there would be about four months at the end of the construction period for some painting, paving, testing and start-up activities. Assuming an average of 21 workdays per month, there would be about 500 workdays of construction activity.

Construction equipment emissions were computed based on the quantity, types, size, and duration of equipment usage. A worksheet for each project construction component was developed that provided the type of equipment, quantity, size, load factor, number of days in use and average hours of usage. This inventory of construction activity was combined with the equipment emissions factors that are used in the CalEEMod Version 2016.3.2 model. These emissions factors are based on CARB's latest OFFROAD model that is used to develop statewide emissions inventories (by county) for various types of construction-type equipment. The emission factors were obtained from the CalEEMod technical appendix (see Appendix D of the CalEEMod User's Guide at www.caleemod.com). Unless specifically known, the horsepower and load factor for each type of equipment was based on the statewide average used in CalEEMod. Construction equipment exhaust emissions were computed for each construction phase of each proposed modification. CalEEMod emissions factors for year 2020 were used in this analysis.

Emissions from construction-related vehicle traffic were computed using emission factors produced by CalEEMod. The CalEEMod emission factors are based on CARB's EMFAC2014 mobile emissions model. These factors were modeled in the spreadsheet to represent annual conditions in Monterey County. Emission factors, which were generated in terms of grams per mile and vehicle trip end emissions, were applied to projected vehicle travel activity for each project component. In the case of ROG, emission factors also included running losses that account for emissions from evaporating fuel and oil while the vehicle is operating. PM_{10} and $PM_{2.5}$ emission factors also include those from brake and tire wear. Emission rates were developed for light-duty trucks (assumed to be worker trips), light-heavy heavy-duty trucks (assumed to be vendor trips), and heavy-heavy duty truck trips assumed to be soil hauling, equipment delivery and cement truck trips. The average distances used by CalEEMod were applied to these trips to estimate vehicle

miles traveled. The vehicle activity in terms of trips and miles traveled for each project component were used with the CalEEMod mobile emission factors to generate emissions.

Emissions associated with ground disturbance were developed for area disturbance (e.g., grading and vehicle activity), trenching for pipeline construction, and vehicle travel on unpaved surfaces. These emissions were computed for the maximum daily projected activity. This maximum day was estimated to occur the peak month of overlapping construction (specifically, when the greatest number of sites involving earth moving activities were anticipated to be occurring simultaneously). Area disturbance emissions are those from general ground disturbance at construction sites. This factor was developed by Midwest Research Institute based on an emission factor of 0.11 tons of PM_{10} per acre of disturbance per day. (CARB, 2013) Since this emission factor assumed some level of construction area watering for dust management, the unmitigated emission factor was computed as twice that factor (i.e., watering was assumed to provide 50% control of emissions). This unmitigated area source emission factor was computed at 20 pounds of PM_{10} emitted per disturbed acre per day.

Emissions for pipeline trenching were based on EPA's AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors (EPA, 2006a). The emission factor is based on the amount of material moved (i.e., excavated and then replaced) in cubic yards, mean wind speed, and material moisture content. The amount of material moved was computed based on the length of pipeline that would be constructed in one day times the assumed width of 6 feet and depth of 6 feet. This amount was then doubled to assume soil would be moved twice, once to excavate, and then to either backfill or load in a truck to export. The wind speed was based on that used by CalEEMod of 7.1 miles per hour. While CalEEMod uses a soil moisture content of 7.9%, a drier moisture content of 2.5% was used since the equation was developed for a range of soil conditions from 0.25% to 4.8%. This is a conservative assumption, since soil excavated for pipeline construction is anticipated to be moist (i.e., probably greater than 4.8%) and drier soil would be more likely to become airborne.

Unpaved roadway travel emissions were computed assuming worker and truck travel at all sites of 0.1 miles. The traffic projections for the maximum daily activity construction period were used to compute daily vehicle miles traveled (VMT) for worker and truck trips. Emission factors were based on the EPA's Unpaved Roadway Emission Factor that is based on silt content and vehicle weight (EPA, 2006b). The silt content of 6.9% used by CalEEMod was applied. The average assumed vehicle weight was 16.4 tons for trucks (i.e., 80% weigh 20 tons and 20% weigh 2 tons).

The construction schedule and equipment usage assumptions and emissions calculations are provided in **Attachment 1**.

Operational Analysis

Operation of the Proposed Expansion Project would generate minor emissions of criteria pollutants (ROG, NO_X, CO, PM_{10}, $PM_{2.5}$) that would result in short-term effects on ambient air quality in the air quality study area and GHGs (CO_2, CH_4, and N_2O) that would add to the existing global GHG emissions that cause climate change. Operational emissions include some vehicle trips

associated with any commuting workers, maintenance trips, truck deliveries and increased electrical demand of the Proposed Expansion Project facilities and changes to electricity demand due to modifications to treatment and pumping facilities (such as the Advanced Water Treatment Plant facility). There would be no new direct, stationary source emissions due to the Proposed Expansion Project; in the unlikely event that emergency back-up power supplies would be needed, the existing emergency generators owned by MRWPCA would likely be used and these are already tested by MRWPCA as part of treatment plant operations. The project has not identified any emergency generators that would be located at any of the well sites or facilities.

Mobile emissions are assumed to be minor as there would only be a few trips added by the project. These were not computed as they are assumed to be negligible, consistent with the findings of the 2015 Air Quality Study.

GHG emissions from changes in electricity demand were computed based on electrical demand of the new and modified facilities and emission factors for electricity generation. Emissions rates associated with electricity consumption were based on Pacific Gas & Electric utilities (PG&E) projected 2020 CO_2 intensity rate (PG&E, 2013). These rates are based, in part, on the requirement of a renewable energy portfolio standard of 33% by the year 2020. The derived 2020 rate for PG&E was estimated at 290 pounds of CO_2 per megawatt of electricity delivered and is based on the California Public Utilities Commission (CPUC) GHG Calculator. Electricity demand for each component of the project was estimated. This included changes to electricity demand at each of the existing facilities whose use would be modified by the Proposed Expansion Project. Note that PG&E's CO2 emissions rate for all of PG&E's delivered electricity, including power purchased from third parties was 294 pounds per megawatt-hour (PG&E 2018 https://www.pgecurrents.com/2018/03/26/independent-registry-confirms-record-low-carbon-emissions-for-pge/).

Impacts

Conflict with or obstruct implementation of the applicable air quality plan (i.e., updates to the AQMP);

The Pure Water Monterey GWR Project Consolidated Environmental Impact Report found no impact associated with the original project because of the following:

- Overall construction emissions associated with the Project would be consistent with the District's 2016 AQMP, and not be considered significant with respect to District-recommended thresholds;

- The Project would not create any new stationary sources of air pollution that would be inconsistent with air quality management and clean air planning efforts;

- The Project would not result in population growth through development of new residential or commercial uses, and would not induce population growth; and

- The Project would not interfere with attainment of the National Ambient Air Quality Standards, as the air basin does not violate standards and is not subject to a federally enforced air quality attainment or maintenance plan.

The Proposed Expansion Project would have the same findings. An evaluation of construction impacts, described later, indicates emissions would be below the significance thresholds recommended by the District, no new stationary sources that would be inconsistent with District rules, regulations or Clean Air Planning projections are proposed, the Project would continue to serve the projected demand in the area and the air basin continues to attain or maintain the NAAQS.

Impact AQ-1: <u>Construction Criteria Pollutant Emissions</u>. Construction of the Proposed Expansion Project would result in emissions of criteria pollutants, specifically PM_{10}, that may conflict with or obstruct implementation of the applicable air quality plan and may violate an air quality standard or contribute substantially to an existing or projected air quality violation in a region that is non-attainment under State ambient air quality standards. (Less-than-significant with Mitigation previously identified)

<u>Construction Emissions</u>

Construction emissions for each project component were computed and the calculations are provided in **Attachment 1**. The expansion project would include construction activities for the following components:

The Advance Water Treatment Facility, which is currently under construction, would be expanded. Construction of this facility, designed to operate at a peak capacity of 5.0 million gallons per day (mgd), was evaluated in the 2015 Air Quality Study. This project proposes to expand the facility to 7.6 mgd.

Extraction well facilities and extracted water conveyance pipelines would be constructed as part of this expansion project. This includes the construction of 800 feet of pipelines, four extraction wells that include small motor/electrical buildings at each site, along with testing activities.

The expansion project would construct injection well facilities. There would be four deep injection wells, two monitoring wells, a small motor/electrical building at each of the four sites, on-site pipelines, a backflush basin and some access roadway grading.

The expansion project would require additional potable and raw water pipelines to convey the water from the new extraction wells to treatment facilities and to the existing CalAm distribution system. An up to 36-inch pipeline that would be up to approximately 2½ miles in length would be installed in the General Jim Moore Boulevard right of way. The pipeline would be constructed on both paved and unpaved areas. This new potable water pipeline was not included in the Approved PWM/GWR Project.

Total emissions for construction of each proposed modification were computed. Daily emissions were then assessed based on the potential for overlapping activities and compared against MBUAPCD thresholds.

Table 2 Daily Construction Emissions by Project Component

Construction Component	Emissions (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Extraction Wells – 2020 through 2021				
Exhaust	3	33	2	1
Fugitive PM	--	--	25	5
Injection Wells – 2020 through 2021				
Exhaust	2	21	1	1
Fugitive PM	--	--	27	5
Advanced Water Treatment Facility Expansion - 2021				
Exhaust	2	31	1	1
Fugitive PM	--	--	7	1
Extraction Pipeline - 2021				
Exhaust	2	21	1	1
Fugitive PM	--	--	4	1
Testing and Cleanup – late 2021				
Exhaust	2	22	1	1

A credible worst-case scenario was evaluated predicting maximum emissions for each year. In 2020, maximum emissions would under the scenario where one injection well and grading of the Backflush Basin could occur simultaneously. In 2021, the highest daily emissions are anticipated during the simultaneous construction of the Advanced Water Treatment Facility expansion interior building construction, extraction well construction, Injection Well building and pipeline construction. Note that drilling, a 24-hour per day operation, would not occur simultaneously at multiple well sites. only at one well site. In 2022, there would be Extraction Well building construction and on-site pipelines along with Conveyance pipeline construction. Testing and cleanup activities would follow completion of that work.

Table 3 Maximum Daily Construction Emissions by Project Component

Construction Component	Maximum Emissions (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Injection Well and Back Flush Basin Construction – 2020				
Exhaust and fugitive	9	89	31	9
AWOF Building Interior, Conveyance Pipeline, Extraction Well and Injection Well Building Construction in 2021				
Exhaust and fugitive	12	117	63	15
Extraction Well Building and Pipeline Construction - 2022				
Exhaust and fugitive	3	22	8	2
Testing and Cleanup - 2022				
Exhaust	2	22	1	1

Impact Conclusion

The Expanded PWM/GWR Project construction would not result in a significant impact due to regional emissions of ozone precursors. With implementation of Mitigation Measure AQ-1

identified in the MPWSP EIR/EIS, maximum daily on-site construction PM_{10} emissions were estimated to be 64 pounds per day, which would not exceed the MBUAPCD's threshold of 82 pounds per day.

Impact AQ-2. Construction Exposure of Sensitive Receptors to Pollutant Emissions. Construction of the Expanded PWM/GWR Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

Sensitive receptors are locations where an identifiable subset of the general population (such as children, asthmatics, the elderly, and the chronically ill) that are at greater risk than the general population may be exposed to the effects of air pollutants. These locations include residences, schools, playgrounds, childcare centers, retirement homes, hospitals, and medical clinics. Table 4, Nearest Sensitive Receptors and Approximate Distances summarizes the nearest sensitive receptors and approximate distances to each of the Proposed Expansion Project component sites.

Table 4. Nearest Sensitive Receptors and Approximate Distances

Project Component	Type of Receptor	Closest Distance from Project
Advanced Water Purification Facility (AWPF)	Farmhouse on Monte Road	One mile
Product Water Conveyance Pipeline	Residences – Ardennes Circle	300 feet
Expanded Injection Well Facilities	Residences – Ardennes Circle	850 feet
CalAm Extraction Wells 1 and 2	Seaside Middle School	Just north of playfields, >500 feet from classrooms
CalAm Extraction Wells 3 and 4	Residences – Ardennes Circle	<100 feet
CalAm Pipelines	Residences (e.g., Del Monte Boulevard and Marina Drive) and Schools	50-100 feet

As identified in the 2015 Air Quality Study, the Expanded PWM/GWR Project would expose sensitive receptors to temporary emissions of toxic air contaminants while construction takes place in the vicinity of these receptors. The primary concern for nearby sensitive receptors would be exposure to diesel particulate matter emissions from diesel-powered construction equipment and diesel trucks associated with construction activities. Diesel particulate matter is classified as a toxic air contaminant by CARB for the cancer risk associated with long-term (i.e., 70 years) exposure. As shown in Table 4, the nearest receptors to non-pipeline work would be located as close as approximately 25 feet from pipeline work, pipeline construction in residential areas would progress at a rate of about 2,000 feet per day, thus limiting nearby receptors' exposure to diesel particulate matter to several days. Construction at the Regional Treatment Plant and New Injection Wells would be over 850 feet from sensitive receptors, and therefore, not have adverse effects. Construction of new Extraction Wells, EW-1 and EW-2, would be near Seaside Middle School. These wells would be slightly over 500 feet from the nearest classrooms. Extraction Wells EH-3 and EH-4, which would be about 25 feet from residences, were studied under the CalAm Monterey Peninsula Water Supply Project (MPWSP) Final EIR/EIS as ASR Injection Wells (CalAm Project)

and found to have less than significant impacts. These findings were based on predictions of increased lifetime cancer risk of less than 10 chances per million.2 The Extraction Wells, EH-1 and EH-2 would be much further from Seaside Middle School receptors, so those same conclusions from the Cal Am Project could be applied to support the findings of a less-than-significant impact in terms of effects to sensitive receptors.

Therefore, a significant cancer risk based on lifetime exposure would not occur due to Expanded PWM/GWR Project construction. Specifically, the cancer risk from the Proposed Expansion Project -associated diesel emissions over a 70-year lifetime would be small and below significance thresholds (10 in one million). Therefore, the impacts related to diesel particulate matter exposure and construction health risk would be less than significant and no additional mitigation measures would be required.

Impact AQ-3: <u>Construction Odors.</u> Construction of the Expanded PWM/GWR Project would not create objectionable odors affecting a substantial number of people. (Less than Significant)

As identified in the 2015 Air Quality Study, there may be intermittent odors from construction associated with diesel exhaust that could be noticeable at times to residences in close proximity. However, given the distance of receptors from most construction sites and the limited construction duration at any one location for pipeline installation, potential odors from construction equipment are not anticipated to result in odor complaints and would not affect a substantial number of people. Odor impacts during construction would be less than significant and no mitigation measures would be required.

Impact AQ-4: <u>Construction Greenhouse Gas Emissions.</u> Construction of the Expanded PWM/GWR Project would generate greenhouse gas emissions, either directly or indirectly, but would not make a considerable contribution to significant cumulative impacts due to greenhouse gas emissions and the related global climate change impacts. (Criterion f) (Less than Significant)

Construction GHG emissions in units of metric tons (MT) of carbon dioxide equivalent (CO_2e) per year were estimated (see modeling worksheets included in **Attachment 1**). Construction of the Proposed Expansion Project would result in a one-time emission total of up to 843 MT of CO_2e during the construction period. The MBUAPCD does not have adopted nor recommended quantified thresholds for assessing the significance of GHG emissions during construction. MBUAPCD staff recommended including construction emissions within operational totals based on the 30-year amortization to provide a full analysis of construction and operational GHG emissions (Clymo, 2014). Accordingly, the total construction period emissions from the Expanded PWM/GWR Project were amortized over a 30-year life and the resulting average annual emissions were added to the annual operational emissions and compared to the GHG significance threshold. The annual amortized GHG emissions are 28 MT/year. Note that some of these emissions were identified in the 2015 Air Quality Study. As explained later under Impact AQ-8, the total GHG emissions from the Proposed Expansion Project would not make a cumulatively considerable

[2] See pages 4.10-27 through 4.10-29 of the MPWSP EIR/EIS.

contribution to significant cumulative impacts associated with GHG emissions and the effects of climate change.

Impact AQ-5: <u>Operational Criteria Pollutant Emissions.</u> Operation of the Expanded PWM/GWR is not expected to increase of criteria pollutants in a cumulatively considerable manner (Less than Significant)

The Expanded PWM/GWR Project would not result in a new stationary source of emissions. Operational emissions due to maintenance truck trips and employee trips would be negligible. Operation of the Project would have a less-than-significant operational air emissions impact.

In the unlikely event of failure of all power supplies at the Advanced Water Purification Facility or well sites, there are provisions to provide electricity from mobile, stand-by diesel generators that are currently used at the RTP in emergencies and are permitted and tested regularly. The Proposed Project would not include any new fixed or stationary generators, nor increased testing of generators. No significant impact would occur due to emissions of criteria pollutants and therefore, no mitigation measures would be required.

Impact AQ-6: <u>Operational Exposure of Sensitive Receptors to Pollutants.</u> Operation of the Expanded PWM/GWR Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

Operation of the Expanded PWM/GWR is not anticipated to result in emissions of TACs that could affect sensitive receptors. The Expanded PWM/GWR Projectwould have no direct sources of operational TAC emissions, and vehicular and truck traffic generated by the project would be negligible and spread across the region. Health risks in terms of excess cancer risk or hazards would be less than significant and no mitigation measures would be required.

Impact AQ-7: <u>Operational Odors.</u> Operation of the Expanded PWM/GWR Project would not create objectionable odors affecting a substantial number of people. (Less than Significant)

The expansion of the Expanded PWM/GWR Project includes modifications to the new AWTF at the existing Regional Treatment Plant where treatment-related odors may already be produced. However, the proposed expansion project would add AWT Facility processes that are not anticipated to result in generation of any additional odors.

Impact AQ-8: <u>Operational Greenhouse Gas Emissions.</u> Operation of the Expanded PWM/GWR Project would generate greenhouse gas emissions, either directly or indirectly. These emissions would not exceed significance thresholds such that they would result in a considerable contribution to significant cumulative impacts of greenhouse gas emissions and the related global climate change impacts. In addition, the Expanded PWM/GWR Project would not conflict with applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gas emissions. (Less than Significant)

Once constructed and operational, the Expanded PWM/GWR Project facilities may require new maintenance and employee vehicle trips; however, these would generate relatively small amounts of GHG emissions and are considered to be negligible. Indirect GHG emissions from energy usage at the proposed facilities would occur. Anticipated electricity demand (mWh/year) was provided by the M1W and used to calculate annual GHG emissions using emissions rates published for PG&E's projected 2020 (the first possible full year of operation would be 2022) CO_2 intensity rate.

The increase in project electricity demand, without incorporation of new energy-saving features, was computed as a total of 22,915 mega-watt hours per year (mWh/year). This was considered as the "Business as Usual" emissions. The Expanded PWM/GWR Project facilities would include numerous energy saving features in the design and operation that would reduce energy demand, which in turn would reduce GHG emissions. These include electricity production from cogeneration at the Regional Treatment Plant, a reduction of 2,999 mWh/year, a purchase agreement with the Monterey Regional Waste Management District to obtain electricity generated from biogas (a renewable fuel source), a reduction of 19,871 mWh/year. The cogeneration plant receives biogas from the anaerobic digesters and produces power using internal combustion engines that run on the biogas. Power from the cogeneration plant is used at the treatment plant. The cogeneration plant produces enough power to operate the secondary treatment process and also produces heat that is used in the digestion process. The use of variable flow drivers (VFD motors) on AWT and product water pumps are estimated to reduce electricity demand. There are other features indirectly associated with the project that would reduce overall electricity demand and facility operating costs that were not included in this analysis. For example, the Salinas Valley Reclamation Plant obtains about half of its electricity from on-site solar panels that were constructed after the AB32 greenhouse gas emission reduction requirements went into effect. With incorporation of the Expanded PWM/GWR Project's energy saving features and use of electricity generated from renewable sources, the net increase in electricity demand for the Expanded PWM/GWR Project is estimated to be 45 mWh/year.

As described above under Impact AQ-4C, construction emissions of GHG were also included in the assessment. Total project-related construction GHG emissions of 1,031 MT were amortized over 30 years and that annual amount was added to the annual Expanded PWM/GWR Project operational emissions. Table 5 summarizes computed annual GHG emissions. As shown in Table 5, annual GHG emissions would be below the project specific GHG significance threshold of 2,000 MT CO_2e per year. Therefore, the Expanded PWM/GWR Project would not make a cumulatively considerable contribution to any significant global climate change impacts and, thus, would have a less-than-significant impact due to GHG emissions. No mitigation measures would be required to reduce GHG emissions; however, the Expanded PWM/GWR Project would use electricity generated through the purchase of landfill gas (or biogas), include energy efficient pumps and treatment processes to minimize GHG emissions.

Table 5. Annual GHG Emissions from Operation (metric tons/year CO2)

Project Component	Electricity Demand (mWh/year)	CO2e MT/yr
Total Construction Emissions (2020-2022) = 843 MT or amortized over 30 years		28 MT/year
Total Net New Expanded PWM/GWR Project Electricity Demand	22,915	
New Electricity Demand Emissions – using Cogeneration, Biogas and PG&E	Net increase = 2,999 Cogeneration* 19,871 Biogas* 45 PG&E	6
Total Net New Expanded PWM/GWR Project GHG Emissions	-	34
Project-Specific Significance Threshold	2,000 MT/year or 16% below Business as Usual	
Exceed Threshold?	No	
*Emissions from cogeneration and purchased landfill gas (biogas) are considered renewable energy sources.		

ATTACHMENT 1

Please contact alison@my1water.org for a copy of this attachment.

Appendix F. WIFIA NEPA Review Environmental Verification, and Cross Cutters Memos

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

WIFIA PROGRAMMATIC ENVIRONMENTAL ASSESSMENT ADEQUACY MEMORANDUM

In accordance with the Council of Environmental Quality's (CEQ) regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) (40 CFR Part 1500), and the U.S. Environmental Protection Agency's (EPA) procedures for implementing the National Environmental Policy Act (NEPA) (40 CFR Part 6), EPA has completed an environmental review of the following proposed action:

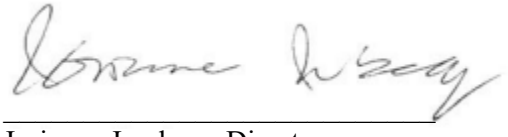
Issuance of Water Infrastructure Finance and Innovation Act (WIFIA) Program Credit Assistance to Monterey One Water Pure Water Monterey Groundwater Replenishment Project

EPA developed a Programmatic Environmental Assessment (PEA) to analyze the potential environmental impacts related to the issuance of credit assistance under the WIFIA program. The proposed federal action under consideration in the PEA was the approval or denial of WIFIA applications by either providing or not providing WIFIA credit assistance. The PEA evaluated the effects of design, construction, operation, and maintenance for a range of types of water and wastewater infrastructure projects that are eligible for WIFIA credit assistance. EPA has determined that the above referenced project falls under one of the project types assessed in the PEA.

The prospective borrower has completed the WIFIA Programmatic Environmental Assessment's (PEA) Environmental Questionnaire and provided supplemental information to the WIFIA program about the project and its potential environmental effects. In carrying out its responsibilities under NEPA, EPA has taken the following actions:

- Reviewed the PEA Environmental Questionnaire and supplemental information submitted by the prospective borrower or directly obtained by EPA;
- Determined the adequacy of the information available for completing the environmental review under NEPA and cross-cutting authorities;
- Assessed site-specific environmental impacts of the above referenced WIFIA project;
- Determined that the reasonably foreseeable environmental effects are within the scope or context of the PEA.

EPA has determined that no significant environmental impacts are anticipated from the issuance of WIFIA credit assistance to the applicant, and the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, making the preparation of an Environmental Impact Statement (EIS) unnecessary. Based on the review documented above, I conclude that this proposal conforms to the WIFIA PEA and associated finding of no significant impact (FONSI), and that the documentation fully covers the proposed action, and constitutes EPA's compliance with the requirements of the NEPA.



October 13, 2022

Jorianne Jernberg, Director
WIFIA Management Division
Office of Wastewater Management

Date

Enclosures
Completed PEA Environmental Questionnaire (and supporting documentation)
Completed Applicant Verification Memorandum (and supporting documentation)

ENVIRONMENTAL REVIEW VERIFICATION

From: Alaina McCurdy, WIFIA Program
To: Paul A. Sciuto, General Manager, Monterey One Water
Cc: Alison Imamura, Principal Engineer, Monterey One Water
Mike McCullough, Director of External Affairs, Monterey One Water
Subject: NEPA finding and Federal Cross-Cutting Authorities Review for Monterey One Water Pure Water Monterey Groundwater Replenishment Project (19115CA)
Date: 08/30/22

Each proposed WIFIA project must be assessed for its impact on the environment under the guidelines set forth by the National Environmental Policy Act of 1969 (NEPA). EPA will not issue a term sheet or obligate funds for a project until a final agency decision has been issued, such as a Categorical Exclusion (CATEX), Environmental Assessment (EA) and a Finding of No Significant Impact (FONSI), or an Environmental Impact Statement (EIS) and a Record of Decision (ROD). Additionally, EPA must consider the impacts that individual actions may have on particular cross-cutter resources and such considerations should be documented as part of the agency's decision-making process.

The prospective borrower has provided information to the WIFIA program about the project and its potential environmental effects. In carrying out its responsibilities, EPA has conducted the NEPA and cross-cutter review and taken the following actions:

- Reviewed the information submitted by the prospective borrower or directly obtained by EPA.
- Determined the adequacy of the information available for making a decision on the appropriate level of environmental review under NEPA and cross-cutting authorities.
- Completed the NEPA process through preparation of the appropriate decision-making document such as a CATEX determination, FONSI, or ROD.
- Documented compliance with cross-cutters in a Federal Cross-Cutting Authorities Review Memorandum.

The enclosed attachments to this memorandum document EPA's NEPA and cross-cutter review. EPA seeks verification on the completeness and correctness of the information provided. After reviewing the attached documents to verify that the information provided is accurate and complete, please sign and return this form to mccurdy.alaina@epa.gov. The signatory on this form must match the signatory in the WIFIA application.

I hereby verify that the information contained in the attached documents is accurate and complete to the best of my knowledge, and that the documents describe the complete project to be funded by the WIFIA loan. I understand that EPA is relying on the attached documents to support its decision.

Signature: _____ *Name of signee:* *Paul A. Sciuto*

Position and Agency/Organization: *General Manager, Monterey One Water* *Date:* *9-28-22*

Attached Documentation:

- Draft Federal Cross-Cutting Authorities Review Memorandum (and supporting documentation)
- Draft NEPA decision-making document (and supporting documentation)

FEDERAL CROSS-CUTTING AUTHORITIES REVIEW MEMORANDUM

From: Alaina McCurdy, WIFIA Program
To: Record
Subject: Federal Cross-Cutting Authorities Review for Monterey One Water Expanded Pure Water Monterey (PWM) Project (Expanded PWM Project) (WIFIA ID 19115CA)
Date: October 13, 2022

This memorandum summarizes the WIFIA Engineering Team's evaluation of the applicability of federal environmental cross-cutting authorities, the impacts from the project, the results of coordination and consultations with other agencies, and documents the review process.

PROJECT DESCRIPTION:

The WIFIA loan includes the base PWM/Groundwater Replenishment (GWR) Project, which is constructed and operational. In addition to the base PWM/GWR Project, the following additional components would be constructed and operated if the WIFIA loan or alternative financing is approved.

Advanced Water Purification Facility (AWPF) Expansion Component. The changes to the PWM/GWR Project to create the Expanded PWM Project would expand the AWPF peak capacity from 5 million gallons per day (mgd) to 7.6 mgd and increase recharge of the Seaside Groundwater Basin by an additional 2,250 acre-feet per year (AFY) (for a total average yield of 5,750 AFY). Modifications would include installation of additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances within the 3.5-acre existing building area. No new ground disturbance nor changes to the AWPF buildings or overhanging canopies are proposed as part of the Expanded PWM Project. All ground disturbance and construction of structures occurred during construction of the base project in 2018 to 2019. Ground disturbance, concrete work, and building/canopy construction, including the depth and heights of construction and permanent facilities, are not being modified for the Expanded PWM Project.

Injection Well Facilities Phase 4 (incl. Conveyance Facilities). The changes to implement the Expanded PWM Project would include construction and operation of additional product water conveyance facilities, specifically, a new product water conveyance pipeline and appurtenances extending from the existing Blackhorse Reservoir to an Expanded Injection Well Area. The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road. The Expanded Injection Well area will include construction and operation of additional Injection Well facilities (including two deep injection wells, electrical and mechanical equipment), additional monitoring well, and an additional backflush pipelines and percolation basin.

PROJECT LOCATION:

The new construction for the Expanded PWM Project is located in northern Monterey County, including within unincorporated parts of the county adjacent to the City of Seaside and within the City of Seaside

itself. The base Project components that are already constructed and operating are located within unincorporated areas of Monterey County and within the cities of Marina, Seaside, and Salinas.

1. ENVIRONMENTAL JUSTICE EXECUTIVE ORDERS NO.12898 AND 14008

PROJECT	PEOPLE OF COLOR (%)	LOW-INCOME (%)	COMMUNITY WITH POTENTIAL EJ CONCERNS
CALIFORNIA	62%	33%	
Monterey County	70%	38%	
City: Seaside	69	36	Y
City: Marina	64	36	Y
City: Salinas	87	42	Y
Advanced Water Purification Facility (Base and Expansion Project)/ **060530143021**	55	32	Y
Blanco Drain (Base Project)/ **060530103061**	44	35	N
Injection Well Facilities and Expansion Pipeline (Base and Expansion Project)/ **060530141073**	57	33	Y
Reclamation Ditch Diversion (Base Project)/ **060530018011**	81	54	Y

The project area occurs across the cities of Marina and Salinas (base Project components only) and Seaside (base Project and expansion Project). Each of these cities contains people of color greater than 50 percent and may be considered a community with potential environmental justice concern. The project area contains three blockgroups with minority populations of greater than 50 percent. One project area blockgroups has low-income populations meaningfully greater than the state or county and may be considered communities with potential environmental justice concerns. Only the blockgroup containing the Blanco Drain (base project) is not considered to be a community with potential environmental justice concerns. Therefore, the study area does contain populations with environmental justice concerns. The project does not appear to be in or cause impacts to Indian country.

The project will result in temporary construction related impacts, generating noise, dust and construction related traffic impacts. Best management practices are being implemented to reduce construction related impacts to communities. The project provides benefits to the greater community by diverting and reusing the urban stormwater runoff as source water for the PWM Project, it will assist in lowering water levels in and around urban and productive agriculture areas threatened by flood. The expansion of the PWM Project will help further prepare the region for the likelihood of future drought conditions. The PWM Project also helps protect the potable water supply for the city of Salinas by slowing seawater intrusion. Project will further improve the water quality in both the Seaside Groundwater Basin and the Salinas Valley Groundwater Basin, as well as in the lower Salinas River and Carmel River.

Implementation of the project would not result in disproportionately high and adverse impacts on minority and low-income populations.

Supporting Documentation:

Attachment A: EPA EJ Screen Reports

2. ENDANGERED SPECIES ACT (16 U.S.C. §§ 1531–1599)

The U.S Fish and Wildlife Service (USFWS) issued a Biological Opinion for the base or original PWM Project on December 20, 2016 (hereafter, referred to as the PWM BioOp). The Expanded PWM Project required that the USFWS review the project changes and the BioOp and to amend the BioOp, if needed. EPA concludes that the Expanded PWM Project may adversely affect the species listed; however, the existing Biological Opinion and its conclusions and avoidance and minimization measures will still apply to the components that have changed for the Expanded Project, such that affects are addressed and the project is not likely to jeopardize the continued existence of the Monterey spineflower.

On March 8, 2022, EPA reinitiated formal consultation with the USFWS and provided a biological assessment. On June 15, 2022, EPA provided an updated biological assessment to USFWS. EPA has determined the Project is **likely to adversely affect** Monterey spineflower, and **may affect, but is not likely to adversely affect** Monterey gilia. On August 17, 2022, USFWS responded to EPA's reinitiation request with updated sections of the Biological Opinion. USFWS concurred with EPA's determination for the Monterey gila. USFWS stated that they do not expect that the proposed action would substantially affect recovery of the Monterey spineflower; at worst, the project could result in the disturbance or loss of approximately 0.2 acre of occupied habitat. These small effects would be reduced by implementation of a rare plant restoration plan that would compensate for impacts at a 1:1 ratio. The conclusion from the 2016 was unchanged in the 2022 update - the project is not likely to jeopardize the continued existence of the Monterey spineflower. Reporting requirements are outlined in the updated Biological Opinion that EPA must follow up on after the closing of the WIFIA loan.

No National Marine Fisheries Service listed species occur within the project area.

Supporting Documentation:

Attachment B: March 2022 letter to FWS

Attachment C: Biological Assessment

Attachment D: Revised Biological Assessment

Attachment E: June 2022 letter to FWS

Attachment F: Updated Biological Opinion Letter, August 2022

3. BALD AND GOLDEN EAGLE PROTECTION ACT (16 U.S.C. §§ 668-668C)

The proposed activity does not involve capture, transport, exhibition, collection, control or disturbance of eagles or eagle parts, nests or eggs. Additionally, no construction is expected to occur in close proximity to eagle nests; therefore, the regulations and requirements of this act do not apply.

4. FISH AND WILDLIFE COORDINATION ACT (16 U.S.C. § 661 ET SEQ.)

The Project would not control or modify surface waters; therefore, the requirements and regulations of this act do not apply.

5. MARINE MAMMAL PROTECTION ACT (16 U.S.C. §§ 1361-1407)

The Project will not affect marine mammals; therefore, the regulations and requirements of this act do not apply.

6. NATIONAL HISTORIC PRESERVATION ACT (NHPA) AS AMENDED (54 U.S.C. § 300101 ET SEQ.: HISTORIC PRESERVATION) AND ARCHEOLOGICAL AND HISTORIC PRESERVATION ACT, AS AMENDED (54 U.S.C. §§ 312501-312508: PRESERVATION OF HISTORICAL AND ARCHEOLOGICAL DATA)

For the original or "base" PWM Project (also referred to as the PWM/Groundwater Replenishment (GWR) Project), M1W secured a Clean Water State Revolving Funds (CWSRF) from the State Water Resources Control Board (State Board) (Project No. C-06-8028-110). The State Board submitted their request for section of the project for review on March 3, 2016, with a finding of no historic properties affected. On April 19, 2016, the State Historic Preservation Officer (SHPO) concurred with the finding assigning the reference number EPA_2016_0304_001. On February 12, 2018, the State Board notified SHPO of project changes, stated that they determined that a finding of No Historic Properties Affected remained appropriate for the amended project, and requested the SHPO review and comment on it. After reviewing the submitted information, the SHPO concurred in a letter dated February 28, 2018.

A reasonable and good faith effort has been made to identify historic properties listed, determined, or potentially eligible for inclusion on the National Record of Historic Properties. The identification effort included a records search, a literature review, a field inventory, and Native American outreach. No historic properties were identified in the area of potential effects. Therefore, EPA has made a finding of No Historic Properties Affected for the installation of the injection wells and associated pipeline and

other project improvements will not have an effect on any historic properties within the Area of Potential Effects.

On January 25, 2022, EPA initiated consultation with the California SHPO. On February 17, 2022, SHPO concurred with EPA's finding of no historic properties affected.

Supporting Documentation:

Attachment G: Section 106 letter January 25, 2022

Attachment H: SHPO concurrence letter February 17, 2022

Attachment I: CWSRF consultation letters and SHPO concurrence letters, 2016-2018

7. ARCHAEOLOGICAL RESOURCES PROTECTION ACT (16 U.S.C. §§ 470AA-MM)

The Project is not located on federal or Indian lands; therefore, the regulations and requirements of this act do not apply.

Supporting Documentation:

Attachment J: U.S. Census Bureau and U.S. EPA American Indian Environmental Office's EPA Tribal Areas (1 of 4): Lower 48 States accessed through NEPAssist, January 25, 2022

8. NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT (25 U.S.C. § 3001 ET SEQ.)

The Project is not located on Indian or Native Hawaiian lands where Native American human remains, funerary objects, sacred objects, and cultural items may be present; therefore, the regulations and requirements of this act do not apply.

Supporting Documentation:

Attachment J: U.S. Census Bureau and U.S. EPA American Indian Environmental Office's EPA Tribal Areas (1 of 4): Lower 48 States accessed through NEPAssist, January 25, 2022

9. CLEAN WATER ACT (SECTION 404) AND RIVERS AND HARBORS ACT (SECTION 10) AND PROTECTION OF WETLANDS (EXECUTIVE ORDER NO. 11990 (1977), AS AMENDED BY EXECUTIVE ORDER NO. 12608 (1997))

There are no wetlands located in the project area. This project does not impact wetlands or waters of the United States, and no permit is required. There are no Section 10 waters in the project area.

Supporting Documentation:

Attachment J: Fish and Wildlife Service's National Wetland Inventory Data accessed through NEPAssist, January 25,2022

10. FLOOD PLAIN MANAGEMENT (EXECUTIVE ORDER NO. 11988 (1977), AS AMENDED BY EXECUTIVE ORDER NO. 12148 (1979))

This project is not located within the floodplain; therefore, this executive order does not apply.

Supporting Documentation:

Attachment J: FEMA's National Flood Hazard Layer accessed through NEPAssist, January 25, 2022

11. SAFE DRINKING WATER ACT (42 U.S.C. §§ 300F-300J-26)

No sole source aquifers exist at or near the Project location; therefore, the regulations and requirements of this act do not apply.

Supporting Documentation:

Attachment J: Data.gov Sole Source Aquifer data accessed through NEPAssist, January 25, 2022

12. FARMLAND PROTECTION POLICY ACT (7 U.S.C. §§ 4201-4209)

None of the Project components would be located on agricultural land. The project is located on lands that are not designated as prime farmland. Therefore, the regulations and requirements of this act do not apply. (see USDA Web Soil Survey Mapper)

Supporting Documentation:

Attachment K: Draft Supplemental EIR 2019

13. COASTAL ZONE MANAGEMENT ACT (16 U.S.C. §§ 1451-1466)

The California coastal zone generally extends 1,000 yards inland from the mean high tide line. The Project is not located within the coastal zone; therefore, the regulations and requirements of this act do not apply. (*See* https://coast.noaa.gov/czm/mystate/#California)

14. COASTAL BARRIERS RESOURCES ACT (16 U.S.C. §§ 3501-3510)

This project is not located within any coastal barriers. Therefore, the project would not conflict with the Coastal Barrier Resources Act. (*See* https://www.fws.gov/ecological-services/habitat-conservation/cbra/maps/mapper.html)

15. WILD AND SCENIC RIVERS ACT (16 U.S.C. §§ 1271-1287)

There are no Wild and Scenic Rivers within the project area; therefore, the regulations and requirements of this act do not apply. (*See* https://www.rivers.gov/river-app/index.html)

16. ESSENTIAL FISH HABITAT CONSULTATION PROCESS UNDER THE MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (16 U.S.C. §§ 1801-1891)

This project is not located within essential fish habitat. Therefore, the regulations and requirements of this act do not apply. (*See* https://www.habitat.noaa.gov/apps/efhmapper/)

17. MIGRATORY BIRD TREATY ACT (16 U.S.C. §§ 703-712)

This project does not involve the taking, killing, possession, transportation, or importation of migratory birds, their eggs, parts, or nests. Beneficial practices to avoid and minimize the incidental take of migratory birds, including best management practices and conservation measures will be implemented when necessary; therefore, this project would not be in conflict with this act.

18. CLEAN AIR ACT CONFORMITY (42 U.S.C. § 7506(C))

The Project is not located in a nonattainment or maintenance area for any relevant pollutants; therefore, the Project is not subject to a conformity determination.

Supporting Documentation:

Attachment J: U.S. EPA Non-Attainment Area data accessed through NEPAssist, January 25, 2022

Attachment K: Draft Supplemental EIR 2019

Attachment L: Final Supplemental EIR April 2020, certified in April 2021

19. WILDERNESS ACT (16 U.S.C. § 1131 ET SEQ.)

The project is not located in or near any Wilderness areas; therefore, the regulations and requirements of this Act do not apply. (*See* http://www.wilderness.net/map.cfm).

Please contact Alison@my1water.org for a copy of Attachments A through L.

Appendix G. Biological Assessment for Re-Initiation (June 2, 2022)

This Appendix is available to download and review at the following link:
https://purewatermonterey.org/reports-docs/

Appendix H. Federal Consultation Memos and Correspondence

This Appendix is available to download and review at the following link:
https://purewatermonterey.org/reports-docs/