

# EXECUTIVE SUMMARY

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## ES.1 Introduction

This Environmental Impact Report (EIR) has been prepared by the California Public Utilities Commission (CPUC) pursuant to the California Environmental Quality Act (CEQA) to analyze the potential environmental impacts of a Monterey Peninsula Water Supply Project (MPWSP or proposed project), proposed by the California American Water Company (CalAm). The purpose of the proposed water supply is to replace existing supplies that are constrained by the legal decisions affecting the Carmel River and Seaside Groundwater Basin water resources, as described in more detail in Chapter 2. The MPWSP would produce desalinated water, convey it to the existing CalAm distribution system, and increase the system's use of storage capacity in the Seaside Groundwater Basin. The MPWSP would consist of several components: a seawater intake system; a desalination plant; a brine discharge system; product water conveyance pipelines and storage facilities; and an aquifer storage and recovery (ASR) system (see Chapter 3).

CalAm also proposed a variant to the proposed project that would combine a reduced-capacity desalination plant and all other facilities included in the proposed project, with a water purchase agreement from the Monterey Regional Water Pollution Control Agency's (MRWPCA) proposed Pure Water Monterey Groundwater Replenishment (GWR) project. This Draft EIR assesses the potential impacts of the MPWSP (in Chapter 4) and the MPWSP Variant (in Chapter 6).

This document has been prepared in accordance with the CEQA statutes and guidelines and the CPUC is the lead agency for this CEQA process. Inquiries about the project should be directed to:

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## ES.2 Project Background and Objectives

### ES.2.1 Project Background

In 2004, CalAm filed Application A.04-09-019 seeking a Certificate of Public Convenience and Necessity from the CPUC for the Coastal Water Project. The Coastal Water Project (CWP) was intended to replace existing Carmel River water supplies for the CalAm Monterey District service area that are constrained by legal decisions (see discussion under the heading, Project Purpose, for more information regarding the legal decisions). In general, the previously proposed CWP involved the production of desalinated water supplies, increased yield from the Seaside Groundwater Basin ASR system, and additional storage and conveyance systems to move the

replacement supplies to the existing CalAm distribution system. The CWP proposed project (also referred to as the Moss Landing Project) was sized to meet existing water demand and did not include supplemental supplies to accommodate growth. The CWP was previously proposed to use the existing intakes at the Moss Landing Power Plant to draw source water for a new 10 million gallons per day (mgd) desalination plant at Moss Landing, construct conveyance and storage facilities, and facility improvements to the existing Seaside Groundwater Basin ASR system. On January 30, 2009, the CPUC published a Draft EIR analyzing the environmental impacts of the previous CWP, as well as the environmental impacts of two project alternatives—the North Marina Project and the Regional Project. The CPUC published the Coastal Water Project Final EIR (SCH No. 2006101004) in October 2009 and certified the EIR in December 2009 (Decision D.09-12-017). A year later, in Decision D.10-12-016, the CPUC approved implementation of the Regional Project alternative.

Subsequent to approval of the Regional Project, CalAm withdrew its support for the Regional Project in January 2012. As a result, in April 2012, CalAm submitted Application A.12-04-019 to the CPUC for the MPWSP. The MPWSP is intended to secure replacement water supplies for the Monterey District associated with legal decisions affecting existing supplies from both the Carmel River and the Seaside Groundwater Basin (see discussion under the heading, Project Purpose, for more information). The MPWSP includes many of the same elements previously analyzed in the CWP EIR; however, key components, including the seawater intake system and desalination plant, have been relocated and/or modified under the current proposal.

Pursuant to CEQA Guidelines Section 15162, the CPUC determined that preparation of a Subsequent EIR is the appropriate level of CEQA review for the MPWSP. Although the MPWSP EIR qualifies as a “Subsequent EIR” under CEQA, there are no special procedural requirements that apply to a Subsequent EIR; therefore, for simplicity, “Subsequent” is not used in the title and this document is referred to as merely an EIR. This EIR provides a comprehensive description and evaluation of all proposed components (including the new proposed elements and previously analyzed components) as the “whole of the action.” This EIR evaluates alternatives not previously considered in the CWP EIR. The CWP EIR is not in itself incorporated by reference into this EIR. However, this EIR utilizes relevant data that was developed for the CWP EIR, and updates the data and prior analyses as appropriate to address the effects of the current proposal.

## ES.2.2 Project Objectives

The primary objectives of the MPWSP are to:

- Develop water supplies for the CalAm Monterey District service area to replace existing Carmel River diversions in excess of CalAm’s legal entitlement of 3,376 acre-feet per year (afy), in accordance with California State Water Resources Control Board (SWRCB) Order 95-10
- Develop water supplies to enable CalAm to reduce pumping from the Seaside Groundwater Basin from approximately 4,000 to 1,474 afy, in accordance with the adjudication of the groundwater basin and consistent with natural yield

- Provide water supplies to allow CalAm to meet its obligation to pay back the Seaside Groundwater Basin by approximately 700 afy over 25 years as established by the Seaside Groundwater Basin Watermaster
- Develop a reliable water supply for the CalAm's Monterey District service area, accounting for the peak month demand of existing customers
- Develop a reliable water supply that meets fire flow requirements for public safety
- Provide sufficient water supplies to serve existing legal lots of record
- Accommodate tourism demand under recovered economic conditions
- Provide sufficient conveyance capacity to accommodate supplemental water supplies that may be developed at some point in the future to meet build out demand, in accordance with adopted General Plans
- Minimize energy requirements and greenhouse gas emissions per unit of water delivered
- Minimize project costs and associated water rate increases
- Locate key project facilities in areas that are protected against predicted future sea-level rise

**Table ES-1** summarizes future water supplies for the Monterey District with implementation of the proposed project.

**TABLE ES-1  
FUTURE WATER SUPPLIES WITH IMPLEMENTATION OF THE PROPOSED PROJECT**

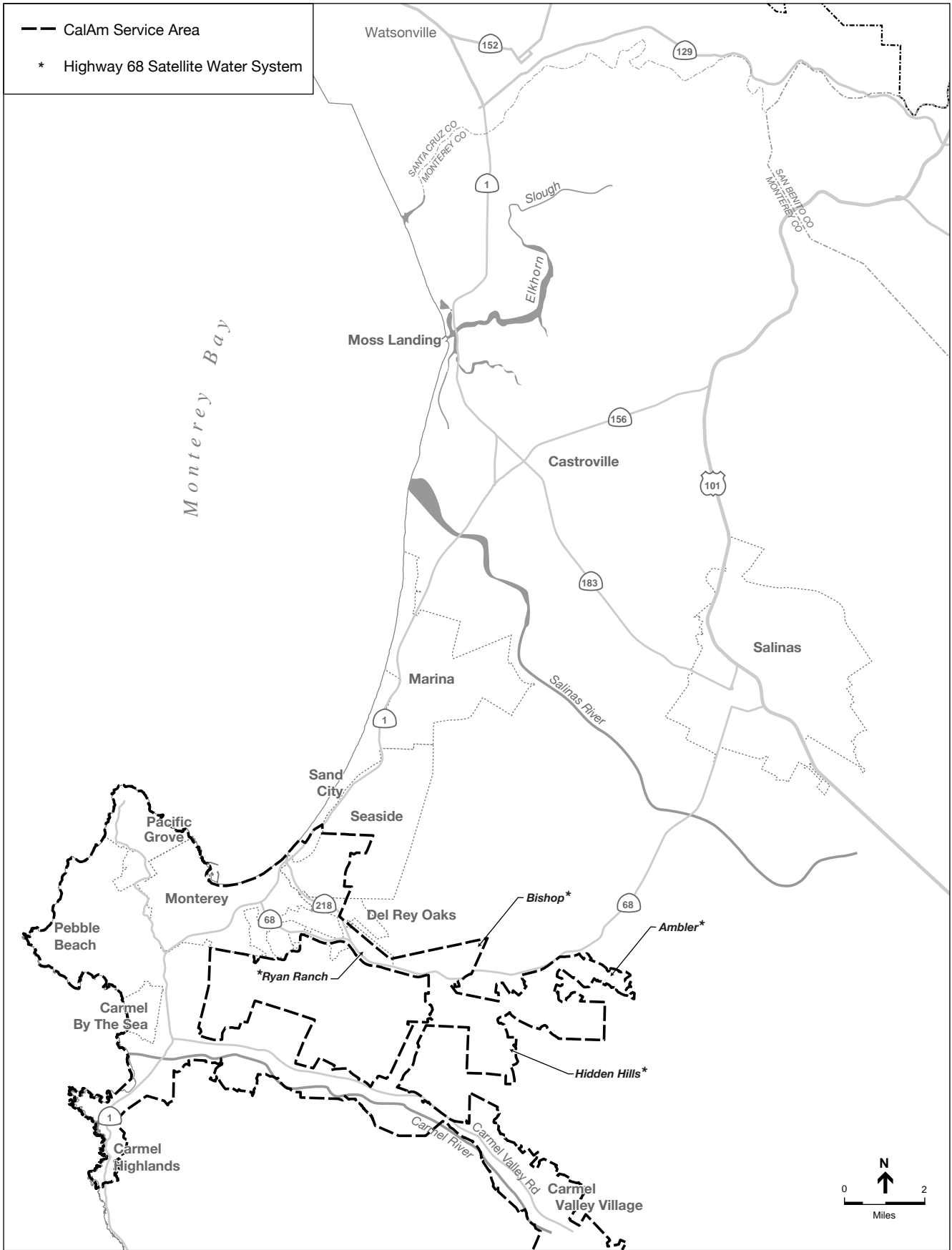
<b>Source</b>	<b>Average Annual Yield (afy)</b>
MPWSP Desalination Plant (Proposed)	9,752
Carmel River Diversions (Existing)	3,376
ASR (Existing)	1,300 <sup>a</sup>
Seaside Groundwater Basin (Existing)	774 <sup>b</sup>
Sand City Coastal Desalination Plant (Existing)	94
<b>Total</b>	<b>15,296</b>

NOTES:

<sup>a</sup> SWRCB Permits 20808A and 20808C allow the MPWMD and CalAm, as co-permittees, to divert up to 2,426 afy and 2,900 afy of water from the Carmel River. Based on historic hydrologic data for the Carmel River, this equates to average annual diversions of 1,920 af of water from the Carmel River for injection into the Seaside Groundwater Basin via ASR. However, because the diversions are dependent on meeting minimum instream flow requirements for steelhead protection, and because precipitation and stream flow can vary considerably from year to year and stream flows may be below average for multiple sequential years, for the purposes of CalAm's water supply assumptions, the long-term average annual yield from injected Carmel River supplies is assumed to be 1,300 acre-feet. The proposed project would provide additional physical capacity for the injection of desalinated product water but would not increase the maximum quantity of water that can be diverted from the Carmel River for injection. The desalinated product water that might be injected into underground storage and subsequently extracted for distribution to customers is included in the total average annual yield of the MPWSP Desalination Plant (9,752 afy).

<sup>b</sup> As discussed in Section 2.2 of Chapter 2, Water Demand, Supplies, and Water Rights, the adjudication of the Seaside Groundwater Basin requires that CalAm replenish the volume of water it pumped from the Seaside Groundwater Basin in excess of the "natural safe yield" (i.e., the quantity of groundwater in the groundwater basin that occurs solely as a result of natural replenishment). CalAm and the Watermaster have tentatively agreed to a replenishment schedule of 25 years at a replenishment rate of 700 afy. After CalAm has fulfilled its replenishment obligations, CalAm could increase pumping to its adjudicated water right of 1,474 afy.

SOURCE: RBF Consulting, 2013a.



SOURCE: ESA, 2013

## ES.3 Description of Proposed Project

The project area extends approximately 14 miles, from the proposed MPWSP Desalination Plant site located in unincorporated Monterey County in the north to the western terminus of the proposed Monterey Pipeline in the city of Pacific Grove, and east approximately 8 miles to the unincorporated community of Hidden Hills along Highway 68 (see **Figure ES-2**). The MPWSP would include construction of up to ten subsurface slant wells and a desalination plant to produce approximately 10,627 afy of desalinated water, including 9,752 afy to meet service area demand and approximately 875 afy to return to the Salinas Valley Groundwater Basin. Under the proposed project, the MPWSP Desalination Plant would have a rated capacity of 9.6-mgd. The proposed project would also include improvements to the existing Seaside Groundwater Basin Aquifer Storage and Recovery (ASR) system facilities, which would enable CalAm to inject desalinated product water into the groundwater basin for subsequent extraction and distribution to customers. The proposed improvements to the ASR system would also increase the efficiency and long-term reliability of the ASR system for injecting Carmel River water into the groundwater basin. The proposed project also includes over 30 miles of pipelines, two pump stations, and water storage tanks.

To inform the final design of the subsurface slant wells and MPWSP Desalination Plant treatment systems, CalAm has constructed a test slant well at the CEMEX active mining area and will operate the test slant well for up to 18 months as part of a pilot program. The pilot program will confirm (or deny) the viability of the proposed subsurface slant wells at the CEMEX active mining area for source water production. Construction and operation of the test slant well was covered under separate environmental review<sup>1</sup> and is not part of the proposed project being evaluated in this EIR. However, if the subsurface slant wells are proven to be viable, CalAm proposes to convert the test slant well into a permanent well and operate it as part of the Seawater Intake System; the conversion and long-term operation of the well has not been covered by previous approvals and is, therefore, evaluated in this EIR as part of the proposed project. The test well is also considered in the cumulative analysis.

The MPWSP would be comprised of the following facilities:

- The Seawater Intake System, which would consist of 10 subsurface slant wells<sup>2</sup> (eight active and two on standby) extending offshore into Monterey Bay, and a Source Water Pipeline to convey the water to the desalination plant
- A 9.6-mgd desalination plant and appurtenant facilities, including pretreatment, reverse osmosis (RO), and post-treatment systems; backwash supply and filtered water equalization

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<sup>1</sup> Environmental review covering the construction of the test slant well and operation of the pilot program was completed by the Monterey Bay National Marine Sanctuary in accordance with NEPA requirements in October 2014 and by the California Coastal Commission (CCC) in accordance with CEQA requirements in November 2014. Coastal Development Permit 9-14-1735, adopted by the CCC in November 2014, permits all work above mean high tide elevation.

<sup>2</sup> The test slant well would be operated as part of the pilot program and later converted into a permanent well. The test well would be one of the ten wells.

tanks; chemical feed and storage facilities; brine storage and conveyance facilities; and other associated non-process facilities

- Desalinated water conveyance facilities, including pipelines, pump stations, clearwells, and a Terminal Reservoir
- An expanded ASR system, including two additional injection/extraction wells (ASR-5 and ASR-6 Wells), a new ASR Pump Station, two parallel ASR Conveyance Pipelines to convey water to and from the ASR-5 and ASR-6 Wells, and an ASR Pump-to-Waste System

**Table ES-2** summarizes the proposed MPWSP facilities.

**TABLE ES-2  
FACILITIES SUMMARY – PROPOSED PROJECT**

<b>Facility</b>	<b>Description</b>	<b>Purpose</b>
<b>Seawater Intake System</b>		
Subsurface Slant Wells	<ul style="list-style-type: none"> <li>Ten slant wells extending offshore beneath the Monterey Bay (one existing test slant well converted into a permanent well plus nine new wells), with up to eight wells operating at any given time and two wells maintained on standby</li> <li>Each slant well would be equipped with a submersible well pump and would collectively provide 24.1 mgd of source water</li> <li>Each well would be approximately 1,000 feet long and extend offshore to a depth of approximately 200 to 220 feet below mean sea level (msl)</li> <li>The wells would be screened in the Dune Sands Aquifer and the 180-Foot Equivalent Aquifer</li> </ul>	These wells would draw seawater from beneath the ocean floor for use as source water for the MPWSP Desalination Plant.
Source Water Pipeline	<ul style="list-style-type: none"> <li>2.7-mile-long, 42-inch-diameter pipeline</li> </ul>	This pipeline would convey the combined source water from the slant well clusters to the MPWSP Desalination Plant.
<b>Desalination Facilities</b>		
Pretreatment System	<ul style="list-style-type: none"> <li>Pressure filters or multimedia gravity filters would be housed within a 6,000-square-foot pretreatment building</li> <li>Two 300,000-gallon backwash supply and filtered water equalization tanks</li> <li>Two 0.25-acre, 6-foot-deep, lined backwash settling basins with decanting system</li> </ul>	The pretreatment system would treat source water to remove suspended and dissolved contaminants that could damage the RO system, thus increasing the efficiency and lifespan of the RO system.
Reverse Osmosis (RO) System	<ul style="list-style-type: none"> <li>Dual-pass RO system comprised of six active modules and one standby module, with each module producing 1.6 million gallons per day (mgd) of “permeate” (the purified water produced through the RO membrane)</li> <li>UV disinfection system (if required)</li> <li>The RO and post-treatment systems and chemical storage tanks would be housed within a 30,000-square-foot process and electrical building.</li> </ul>	The RO system would remove salts and other minerals from pretreated source water. If required by the California Department of Public Health, the UV Disinfection system would provide additional primary disinfection.
Post-treatment System	<ul style="list-style-type: none"> <li>Chemical feedlines and injection stations (for carbon dioxide, lime, sodium hydroxide, phosphate-based corrosion inhibitor, and sodium hypochlorite)</li> </ul>	The post-treatment system would adjust the hardness, pH, and alkalinity of the desalinated product water and disinfect the water in accordance with drinking water requirements.
Chemical Storage	<ul style="list-style-type: none"> <li>Chemical storage tanks with secondary containment</li> <li>Sumps and sump pumps</li> </ul>	This facility would provide for chemical storage. The capacity of the chemical storage tanks would range from less than 5,000 gallons to 20,000 gallons, depending on the treatment chemical.

**TABLE ES-2 (Continued)**  
**FACILITIES SUMMARY – PROPOSED PROJECT**

Facility	Description	Purpose
<b>Desalination Facilities (cont.)</b>		
Administrative Building	<ul style="list-style-type: none"> <li>4,000- to 6,000-square-foot building</li> </ul>	This building would house restrooms, locker rooms, break rooms, conference rooms, electrical controls, laboratory facilities, equipment storage and maintenance, and electrical service equipment.
<b>Brine Storage and Disposal Facilities</b>		
Brine Storage and Disposal	<ul style="list-style-type: none"> <li>3-million-gallon brine storage basin</li> <li>1-mile-long, 30-inch-diameter Brine Discharge Pipeline</li> </ul>	Brine concentrate produced during the RO process would be conveyed to the brine storage basin located at the MPWSP Desalination Plant. The Brine Discharge Pipeline would convey decanted effluent from the pretreatment filtration backwash cycle and RO concentrate produced by the RO system to the existing Monterey Regional Water Pollution Control Agency's (MRWPCA) outfall pipeline and diffuser.
MRWPCA Ocean Outfall Pipeline and Diffuser (existing)	<ul style="list-style-type: none"> <li>2.3 mile-long, 60-inch diameter pipe (onshore portion)</li> <li>2.1-mile-long, 60-inch-diameter pipe (offshore portion)</li> <li>1,100-foot-long diffuser with 172 ports (120 ports are open and 52 are closed), each 2 inches in diameter and spaced 8 feet apart</li> </ul>	Brine and pretreatment backwash effluent from the desalination plant would be conveyed to the existing ocean outfall pipeline. The outfall would terminate at a diffuser located offshore that would discharge the concentrate to Monterey Bay.
<b>Desalinated Water Conveyance and Storage Facilities</b>		
Clearwells (Water Storage Tanks) and Clearwell Pump Station	<ul style="list-style-type: none"> <li>9.6-mgd, 120-horsepower pump</li> <li>Two 85-foot-diameter, 750,000-gallon aboveground storage tanks (with a total combined storage volume of 1.5 million gallons).</li> </ul>	The clearwell pump station would pump water from the post-treatment process to the clearwells. The clearwells would serve as holding tanks from which water would be pumped to either the CalAm water system or the existing Castroville Seawater Intrusion Project (CSIP) pond.
Desalinated Water Pump Station	<ul style="list-style-type: none"> <li>3,000-square-foot pump station housing two pumps:               <ul style="list-style-type: none"> <li>9.6-mgd, 800-horsepower pump to pump water through the Desalinated Water Pipeline to the CalAm water system</li> <li>1.4-mgd, 20-horsepower pump to pump water through the Salinas Valley Return Pipeline to the CSIP pond</li> </ul> </li> </ul>	This facility would pump desalinated product water from the MPWSP Desalination Plant to the CalAm water system and existing CSIP pond.
Salinas Valley Return Pipeline	<ul style="list-style-type: none"> <li>1.2-mile-long, 12-inch-diameter pipeline</li> </ul>	This pipeline would convey desalinated product water from the MPWSP Desalination Plant to the CSIP pond for subsequent delivery to agricultural users in the Salinas Valley.



**TABLE ES-2 (Continued)**  
**FACILITIES SUMMARY – PROPOSED PROJECT**

<b>Facility</b>	<b>Description</b>	<b>Purpose</b>
<b>Desalinated Water Conveyance and Storage Facilities (cont.)</b>		
Desalinated Water Pipeline	<ul style="list-style-type: none"> <li>3.3-mile-long, 36-inch-diameter pipeline</li> </ul>	This pipeline would convey desalinated product water from the clearwells at the MPWSP Desalination Plant to the Transmission Main at Reservation Road.
Transmission Main	<ul style="list-style-type: none"> <li>6-mile-long, 36-inch-diameter force main</li> </ul>	This pipeline would convey desalinated product water between the Desalinated Water Pipeline at Reservation Road to the Monterey Pipeline and Transfer Pipeline at the intersection of Del Monte Boulevard/Auto Center Parkway.
Transfer Pipeline	<ul style="list-style-type: none"> <li>3-mile-long, 36-inch-diameter pipeline (could be operated in both directions)</li> </ul>	This pipeline would convey potable water supplies to the Terminal Reservoir for storage, and ASR product water and other potable water supplies stored in the Terminal Reservoir to the Monterey Pipeline.
Monterey Pipeline	<ul style="list-style-type: none"> <li>5.4-mile-long, 36-inch-diameter pipeline (could be operated in both directions)</li> </ul>	This pipeline would convey water supplies between its connection with the Transmission Main and Transfer Pipeline Seaside to the Monterey Peninsula.
Interconnection Improvements for Highway 68 Satellite Systems a) Ryan Ranch–Bishop Interconnection b) Main System–Hidden Hills Interconnection	<ul style="list-style-type: none"> <li>a) 1.1-mile-long, 8-inch-diameter pipeline</li> <li>b) 1,200-foot-long, 6-inch-diameter pipeline</li> </ul>	These interconnection pipelines and associated improvements would allow MPWSP supplies to be conveyed to the Ryan Ranch, Bishop, and Hidden Hills water systems.
Terminal Reservoir	<ul style="list-style-type: none"> <li>Two 3-million-gallon storage tanks</li> </ul>	These tanks would store desalinated product water and ASR product water.
Valley Greens Pump Station	<ul style="list-style-type: none"> <li>3-mgd, 100-horsepower pump station</li> </ul>	This 600-square-foot facility would provide the additional water pressure needed to pump water through the existing Segunda Pipeline into Segunda Reservoir.
<b>ASR System</b>		
Six ASR Injection/Extraction Wells (four existing wells and two proposed): a) ASR-1 and ASR-3 Wells (existing) b) ASR-3 and ASR-4 Wells (existing) c) ASR-5 and ASR-6 Wells (proposed)	<ul style="list-style-type: none"> <li>Four existing injection/extraction wells (Phase I and II wells)</li> <li>Two proposed 1,000-foot-deep injection/extraction wells (ASR-5 and ASR-6 Wells) with a combined injection capacity of 2.2 mgd and extraction capacity of 4.3 mgd</li> </ul>	The existing and proposed ASR injection/extraction wells would be used to inject Carmel River supplies and desalinated product water into the Seaside Groundwater Basin for storage. During periods of peak demand, the stored water would be extracted and delivered to customers.
ASR Pump Station	<ul style="list-style-type: none"> <li>8.4-mgd, 300-horsepower pump station</li> </ul>	This pump station would be used to pump water to and from the ASR injection/extraction wells through existing and proposed pipelines.

**TABLE ES-2 (Continued)  
FACILITIES SUMMARY – PROPOSED PROJECT**

Facility	Description	Purpose
<b>ASR System (cont.)</b>		
ASR Conveyance Pipelines	<ul style="list-style-type: none"> <li>• Two parallel 0.9-mile-long, 30-inch-diameter pipelines</li> </ul>	One of these pipelines would be used to convey water from existing conveyance facilities at the corner of Coe Avenue and General Jim Moore Boulevard to the new ASR-5 and ASR-6 Wells for injection; the other pipeline would be used to convey extracted ASR supplies to the same existing facilities.
ASR Pump-to-Waste System	<ul style="list-style-type: none"> <li>• 0.9-mile-long, 16-inch-diameter ASR Pump-to-Waste Pipeline</li> <li>• 4,800-square-foot, 12-foot-deep ASR Settling Basin</li> </ul>	The ASR Pump-to-Waste System would flush sediment and other suspended solids out of the two proposed ASR injection/extraction wells and convey it to a new settling basin (the proposed ASR Settling Basin) at the same site, or to the existing settling basin for the ASR-1 and ASR-2 Wells located approximately 2 miles to the south. The ASR Pump-to-Waste Pipeline would connect to existing pump-to-waste pipelines located at the intersection of General Jim Moore Boulevard and Coe Avenue.

SOURCE: RBF Consulting, 2013b, with subsequent refinements per updated info provided by CalAm.







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The proposed project facilities are expected to be constructed over approximately 30 months, from October 2016 through March 2019. Construction for the proposed project activities would include site grading and excavation; well drilling and well development; installation of prefabricated components (e.g., pretreatment and RO facilities, storage tanks, etc.); construction of desalination, electrical, pump, and chemical buildings; construction of pipelines; installation of overhead and underground powerlines; and disposal of construction waste and debris. Construction equipment and materials associated with the Seawater Intake System, MPWSP Desalination Plant, and ASR injection/extraction wells would be stored within the respective construction work areas. Construction equipment and materials associated with pipeline installation would be stored along the pipeline easements and at nearby designated staging areas. Staging areas would not be sited in sensitive areas such as riparian or critical habitat for protected species. To the extent feasible, parking for construction equipment and worker vehicles would be accommodated within the construction work areas and on adjacent roadways.

It is expected that the subsurface slant wells and MPWSP Desalination Plant would be operated 24 hours a day, 365 days per year. Up to eight subsurface slant wells would be operated at any given time, for a combined total of up to 24.1 million gallons per day (mgd) of source water. At least two wells would be maintained on standby.

The brine stream would be discharged to Monterey Bay via the existing Monterey Regional Water Pollution Control Agency's (MRWPCA) ocean outfall and diffuser. During wet periods, the brine stream would be blended with treated wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant prior to discharge. However, the brine stream could be discharged without dilution for extended periods during dry months when all of the treated wastewater effluent is reclaimed for agricultural irrigation. It is assumed that the amount of treated wastewater effluent available for blending would be highly variable throughout the year.

The MRWPCA's 1,100-foot-long diffuser is equipped with 172 ports (120 ports are open and 52 are closed), each 2 inches in diameter and spaced 8 feet apart. The diffuser would serve to disperse the brine stream at the discharge point, thereby minimizing salinity differences between the discharges and surrounding seawater.

Carmel River supplies would be injected into the groundwater basin via ASR in accordance with the MPWMD's and CalAm's existing SWRCB Permits 20808A and 20808C. Similar to existing operations, CalAm proposes to use the ASR system to store water supplies during wet periods. Both desalinated product water and Carmel River supplies would be chlorinated to drinking water standards prior to injection. Desalinated product water would be conveyed through the proposed Desalinated Water Pipeline, Transmission Main, and Transfer Pipeline to the Terminal Reservoir. Carmel River supplies would be conveyed through the existing Segunda Pipeline to the Terminal Reservoir. From the Terminal Reservoir, the water would be injected into the northern subbasin of the Seaside Groundwater Basin.

Similar to operations for the existing ASR injection/extraction wells, facility operators would regularly backflush accumulated sediment and turbid water from the ASR-5 and ASR-6 Wells. The duration of backflushing would range from a few minutes to 2 hours. Water produced during

routine backflushing of the proposed ASR-5 and ASR-6 Wells would be routed to the proposed ASR Settling Basin and percolated into the ground, or conveyed via the new ASR Pump-to-Waste Pipeline to the existing Phase I ASR Pump-to-Waste System located at the intersection of General Jim Moore Boulevard and Coe Avenue.

It is assumed that the proposed pump stations could operate continuously for up to 24 hours a day. Although pump stations would typically be operated remotely via SCADA, facility operators would conduct routine visits to the pump station sites to monitor operations, conduct general maintenance activities, and service the pumps. General operations and maintenance activities associated with pipelines would include annual inspections of the cathodic protection system and replacement of sacrificial anodes when necessary; testing and servicing of valves; vegetation maintenance along rights-of-way; and repairs of minor leaks in buried pipeline joints or segments.

The total net increase in energy demand for operation of the Seawater Intake System, desalination facilities, pump stations and conveyance facilities, and ASR facilities is estimated to be approximately 40,500 MWh/year (RBF Consulting, 2013c). It is assumed that electrical power for all of the proposed project facilities would be provided via the PG&E power grid.

## **ES.4 Proposed Project Impact Summary**

Chapter 4 of the EIR evaluates the environmental effects of implementing the proposed project and presents mitigation measures that would reduce potentially significant impacts to less than-significant levels, when feasible. A summary of impacts and mitigation measures is provided in **Table ES-3**.

As identified in Table ES-3, significant impacts may occur to geology, soils, and seismicity, surface water hydrology and water quality, groundwater resources, marine resources, terrestrial biological resources, hazards and hazardous materials, land use, land use planning and recreation, traffic and transportation, air quality, greenhouse gases, noise and vibration, utilities, aesthetics, cultural and paleontological resources, agricultural resources, and energy resources. All impacts would be reduced to less-than-significant levels through the implementation of mitigation measures, with the exception of impacts relative to noise and vibration (during construction), greenhouse gases (during operations) and indirect impacts from growth. Further, the proposed project may result in cumulative impacts when viewed in combination with other past, present, and reasonably foreseeable future projects. The Draft EIR identifies that with mitigation, the proposed project would not have a considerable contribution to cumulative impacts, with the exception of cumulative impacts relative to transportation and traffic, noise and vibration (during construction), and cumulative impacts to GHG (during project operations).

**TABLE ES-3  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Section 4.2: Geology, Soils, and Seismicity</b>																			
<b>Impact 4.2-1:</b> Increased soil erosion or loss of topsoil during construction.	LSM	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.	X	-	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-		
4.16-3: Measures to Minimize Indirect Effects on Agricultural Land.	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-2:</b> Exposure of people or structures to substantial adverse effects related to fault rupture.	NI	NI	NI	NI	NI	NI	LS	NI	LS	NI	NI	NI	NI	LS	NI	LS	NI	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-3:</b> Exposure of people or structures to substantial adverse effects related to seismically-induced groundshaking.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-4:</b> Exposure of people or structures to substantial adverse effects related to liquefaction and lateral spreading.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-5:</b> Exposure of people or structures to substantial adverse effects related to landslides.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-6:</b> Exposure of people or structures to substantial adverse effects related to coastal erosion and bluff retreat caused by sea level rise.	LSM	NI	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	LSM	
<i>Mitigation Measures</i>																			
4.2-6a: Slant Well Abandonment Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.2-6b: Monterey Pipeline Deepening.	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-		
<b>Impact 4.2-7:</b> Exposure of people or structures to substantial adverse effects related to land subsidence.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.2-8:</b> Exposure of people or structures to substantial adverse effects related to expansive soils.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	LS	LS	LS	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Siant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project
<b>Impact 4.2-9:</b> Exposure of structures to substantial adverse effects related to corrosive soils.	NI	LS	NI	NI	NI	NI	NI	NI	NI	LS	LS	LS	LS	LS	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cumulative impacts related to geology, soils, and seismicity.</b>										<b>LS</b>								
<b>Section 4.3: Surface Water Hydrology and Water Quality</b>																		
<b>Impact 4.3-1:</b> Degradation of water quality associated with increased soil erosion and inadvertent releases of toxic chemicals during general construction activities.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-2:</b> Degradation of water quality from construction-related discharges of dewatering effluent from open excavations and water produced during well drilling and development.	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LSM	LSM	LSM	LSM	LSM	LSM	<b>LSM</b>
<i>Mitigation Measures</i>																		
4.7-2b: Soil and Groundwater Management Plan.	-	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X
<b>Impact 4.3-3:</b> Degradation of water quality from discharges of treated water and disinfectant from existing and newly installed pipelines during construction.	NI	NI	LS	LS	LS	LS	LS	LS	LS	NI	NI	LS	NI	LS	LS	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-4:</b> Violate water quality standards or waste discharge requirements, or degrade water quality as a result of brine discharge from the operation of the MPWSP Desalination Plant.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	<b>LSM</b>
<i>Mitigation Measures</i>																		
4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-5:</b> Violate water quality standards or waste discharge requirements for salinity, or degrade water quality from increased salinity as a result of brine discharge from the operation of the MPWSP Desalination Plant.	NI	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-6:</b> Degradation of water quality due to discharges associated with maintenance of the subsurface intake wells and the ASR injection/extraction wells.	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project
<b>Impact 4.3-7:</b> Alteration of drainage patterns such that there is a resultant increase in erosion, siltation, or the rate or amount of surface runoff.	LS	LS	NI	NI	NI	NI	NI	NI	NI	LS	LS	NI	LS	NI	NI	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-8:</b> Alteration of drainage patterns such that there is an increase in flooding on- or offsite or the capacity of the stormwater drainage system is exceeded.	NI	LS	NI	NI	NI	NI	NI	NI	NI	LS	LS	NI	LS	NI	NI	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-9:</b> Impedance or redirection of flood flows due to the siting of project facilities in a 100-year flood hazard area.	LS	NI	LS	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-10:</b> Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to a tsunami.	LS	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.3-11:</b> Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise.	LS	LS	LS	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cumulative impacts to surface water hydrology and water quality.</b>	<b>LS</b>																	
<b>Section 4.4: Groundwater Resources</b>																		
<b>Impact 4.4-1:</b> Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.4-2:</b> Violate any water quality standards or otherwise degrade groundwater quality during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project
<b>Impact 4.4-3:</b> Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during operations so as to expose well screens and pumps.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Applicant Proposed Mitigation Measures</i>																		
4.4-3: Groundwater Monitoring and Avoidance of Well Damage.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.4-4:</b> Violate any water quality standards or otherwise degrade groundwater quality during operations.	LSM	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																		
4.4-4: Groundwater Monitoring and Avoidance of Impacts to Groundwater Remediation Plumes.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cumulative impacts related to groundwater resources.</b>										<b>LS</b>								
<b>Section 4.5: Marine Resources</b>																		
<b>Impact 4.5-1:</b> Result in substantial adverse effects on candidate, sensitive, or special-status species during construction.	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.5-2:</b> Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.5-3:</b> Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
<i>Mitigation Measures</i>																		
4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.5-4:</b> Result in substantial interference with the movement of any native resident or migratory fish or wildlife species during project operations.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
<i>Mitigation Measures</i>																		
4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.5-5:</b> Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation.	NI	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cumulative impacts related to marine biological resources.</b>										<b>LS</b>								

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Section 4.6: Terrestrial Biological Resources</b>																			
<b>Impact 4.6-1:</b> Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly or through habitat modification, during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																			
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1c: General Avoidance and Minimization Measures.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1d: Protective Measures for Western Snowy Plover.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1e: Avoidance and Minimization Measures for Special-status Plants.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	-	-	
4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly.	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	-	
4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	
4.6-1h: Avoidance and Minimization Measures for Western Burrowing Owl.	-	-	X	-	-	X	X	X	-	X	-	-	-	-	-	-	-	-	
4.6-1i: Avoidance and Minimization Measures for Nesting Birds.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1j: Avoidance and Minimization Measures for American Badger.	-	-	X	-	-	X	X	X	-	X	X	X	X	X	X	X	-	-	
4.6-1k: Avoidance and Minimization Measures for Monterey Dusky-Footed Woodrat.	-	-	-	-	-	-	-	X	-	X	X	X	X	X	X	X	-	-	
4.6-1l: Avoidance and Minimization Measures for Special-status Bats.	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine.	-	-	-	-	-	-	-	X	X	X	-	-	-	X	X	X	X	X	
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1o: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander.	-	X	X	X	X	X	-	X	-	X	-	-	-	X	-	X	-	-	
4.12-1b: General Noise Controls for Construction Equipment.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.14-2: Site-Specific Construction Lighting Measures.	X	X	X	X	X	X	X	X	X	-	X	X	X	-	-	-	-	-	
<b>Impact 4.6-2:</b> Result in substantial adverse effects on riparian habitat, critical habitat, or sensitive natural communities during construction.	LSM	LS	LSM	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																			
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	
4.6-1c: General Avoidance and Minimization Measures.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	
4.6-1d: Protective Measures for Western Snowy Plover.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1e: Avoidance and Minimization Measures for Special-status Plants.	-	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-	-	

**TABLE ES-3 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.	X	-	X	-	-	X	X	-	X	-	-	-	-	-	-	-	-		
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.	X	-	X	-	-	X	X	X	X	X	X	X	X	-	-	-	-		
<b>Impact 4.6-3:</b> Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the State during construction.	LSM	LS	LSM	LS	LS	LSM	LSM	LS	LSM	LSM	LS	LS	LS	LSM	LSM	LS	LS		
<i>Mitigation Measures</i>																			
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	X	-	-	X	X	-	X	X	-	-	-	X	X	-	-		
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	X	-	-	X	X	-	X	X	-	-	-	X	X	-	-		
4.6-1c: General Avoidance and Minimization Measures.	X	-	X	-	-	X	X	-	X	X	-	-	-	X	X	-	-		
4.6-3: Avoid, Minimize, and or Mitigate Impacts to Wetlands.	-	-	-	-	-	X	X	-	X	X	-	-	-	X	X	-	-		
<b>Impact 4.6-4:</b> Conflict with local tree ordinances.	NI	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	NI	LSM	
<i>Mitigation Measures</i>																			
4.6-4: Compliance with Local Tree Ordinances.	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	
<b>Impact 4.6-5:</b> Result in a substantial adverse effect on candidate, sensitive, or special-status species during project operations.	LSM	LSM	NI	NI	NI	NI	NI	NI	NI	LSM	LS	NI	NI	NI	LS	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1d: Protective Measures for Western Snowy Plover	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1e Avoidance and Minimization Measures for Special-status Plants.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1f: Avoidance and Minimization Measures for Smith’s Blue Butterfly.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1i: Avoidance and Minimization Measures for Nesting Birds.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.6-5: Installation and Monitoring of Bird Deterrents at the Brine Storage Basin.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.12-1b: General Noise Controls for Construction Equipment.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.14-2: Site-Specific Construction Lighting Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4.14-4: Outdoor and Security Lighting.	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-		

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project
<b>Impact 4.6-6</b> Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during project operations.	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																		
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1d: Protective Measures for Western Snowy Plover	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.6-7:</b> Result in substantial adverse effects of federal wetlands, federal other waters, and/or waters of the State during project operations.	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																		
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.6-8:</b> Conflict with the provisions of an adopted Habitat Conservation Plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plan.	NI	NI	NI	NI	NI	NI	NI	LSM	NI	LSM	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																		
4.6-8: Management Requirements within Borderland Development Areas along Natural Resource Management Area Interface.	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-
<b>Cumulative impacts related to terrestrial biological resources.</b>										<b>LS</b>								
<b>Section 4.7: Hazards and Hazardous Materials</b>																		
<b>Impact 4.7-1:</b> 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	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.7-2:</b> Reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																		
4.7-2a: Health and Safety Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project
4.7-2b: Soil and Groundwater Management Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.7-3:</b> Project facilities would be located on a known hazardous materials site.	NI	NI	NI	NI	NI	NI	NI	LS	NI	LS	NI	LS	NI	NI	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.7-4:</b> Handle hazardous materials or emit hazardous emissions within 0.25 mile of schools during construction.	NI	NI	NI	NI	NI	LS	LS	LS	LS	NI	NI	LS	NI	NI	NI	NI	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.7-5:</b> Increase risk of wildland fires during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.7-6:</b> Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during project operations.	LS	LS	NI	NI	NI	NI	NI	NI	NI	LS	LS	NI	NI	NI	NI	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.7-7:</b> Handle hazardous materials or emit hazardous emissions within 0.25 mile of a school during project operations.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.7-8:</b> Project facilities are located within an airport land use plan area, presenting a potential safety hazard for people residing or working in the project area.	NI	LS	NI	LS	LS	LS	LS	LS	LS	NI	NI	NI	NI	LS	NI	NI	NI	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to hazards and hazardous materials.</b>										<b>LS</b>								
<b>Section 4.8: Land Use, Land Use Planning, and Recreation</b>																		
<b>Impact 4.8-1:</b> Consistency with applicable plans, policies, and regulations related to land use and recreation that were adopted for the purpose of mitigating an environmental effect.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																		
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to land use and recreation.</b>										<b>NI</b>								

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Section 4.9: Traffic and Transportation</b>																			
<b>Impact 4.9-1:</b> Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.	LS	LS	LS	LS	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	-	-		
<b>Impact 4.9-2:</b> Temporary reduction in roadway capacities and increased traffic delays during construction.	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LSM	LS	LSM	LSM	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	X	X	X	X	X	X	-	-	X	-	X	X	-	-		
<b>Impact 4.9-3:</b> Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	
<i>Mitigation Measures</i>																			
4.9-1: Traffic Control and Safety Assurance Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.9-4:</b> Impaired emergency access during construction.	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LSM	LS	LSM	LSM	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	X	X	X	X	X	X	-	-	X	-	X	X	-	-		
<b>Impact 4.9-5:</b> Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LSM	LS	LSM	LSM	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	X	X	X	X	X	X	-	-	X	-	X	X	-	-		
<b>Impact 4.9-6:</b> Increased wear-and-tear on the designated haul routes used by construction vehicles.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	
<i>Mitigation Measures</i>																			
4.9-6: Roadway Rehabilitation Program.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.9-7:</b> Parking interference during construction.	NI	NI	LS	LS	LS	LS	LS	LS	LSM	LS	LS	LS	LS	LS	LS	LS	LS	LSM	
<i>Mitigation Measures</i>																			
4.9-7: Construction Worker Parking Requirements.	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-		
<b>Impact 4.9-8:</b> Long-term traffic increases on regional and local roadways during project operations and maintenance.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Cumulative impacts related to transportation and traffic.</b>	<b>SUM</b>																		
<i>Mitigation Measures</i>																			
<b>4.9-C.1: Construction Traffic Coordination Plan.</b>	<b>X</b>																		



**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Section 4.10: Air Quality</b>																			
<b>Impact 4.10-1:</b> Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																			
4.10-1a: Construction Fugitive Dust Control Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.10-1b: Stabilize Dust on Terminal Reservoir/ASR Pump Station Access Road.	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
4.10-1c: Idling Restrictions.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.10-2:</b> Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.10-3:</b> Long-term increase of criteria pollutant emissions that could affect regional air quality during project operations.	NI	LS	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.10-4:</b> Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during operations.	NI	LS	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to air quality.</b>										<b>LS</b>									
<b>Section 4.11: Greenhouse Gas Emissions</b>																			
<b>Impact 4.11-1:</b> Incremental contribution to climate change from GHG emissions associated with the proposed project.	<b>SUM</b>																		<b>SUM</b>
<i>Mitigation Measures</i>																			
4.11-1: GHG Emissions Reduction Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.18-1: Construction Equipment Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.11-2:</b> Conflict with Executive Order S-3-05 and/or the AB 32 Emissions Reduction Goals.	<b>SUM</b>																		<b>SUM</b>
<i>Mitigation Measures</i>																			
4.11-1: GHG Emissions Reduction Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.18-1: Construction Equipment Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	



**TABLE ES-3 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Impact 4.11-3:</b> Conflict with AB 32 Climate Change Scoping Plan.	SUM																	<b>SUM</b>	
<i>Mitigation Measures</i>																			
4.11-1: GHG Emissions Reduction Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Cumulative impacts related to greenhouse gas emissions.</b>	SU																		
<b>Section 4.12: Noise and Vibration</b>																			
<b>Impact 4.12-1:</b> Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	LS	LS	LS	LS	LS	LSM	LSM	LS	SUM	LS	SUM	LS	LSM	LS	LS	LSM	LSM	<b>SUM</b>	
<i>Mitigation Measures</i>																			
4.12-1a: Neighborhood Notice.	-	-	-	-	-	X	X	-	X	-	X	-	X	-	-	X	X		
4.12-1b: General Noise Controls for Construction Equipment.	-	-	-	-	-	X	X	-	X	-	X	-	X	-	-	X	X		
4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.	-	-	-	-	-	X	X	-	X	-	-	-	-	-	-	-	-		
4.12-1d: Additional Noise Controls for ASR-5 and ASR-6 Wells.	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-		
4.12-1e: Offsite Accommodations for Substantially Affected Receptors.	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-		
<b>Impact 4.12-2:</b> Expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during construction.	LS	LS	LS	LS	LS	LS	LS	NI	NI	LSM	NI	LSM	NI	LS	LS	LS	LS	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.12-1b: General Noise Controls for Construction Equipment.	-	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-		
4.12-1c: Noise Control Plan for Pipeline Installation in Noise Restricted Locations and Nighttime Conditions.	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	-	-		
<b>Impact 4.12-3:</b> Exposure of people to or generation of excessive groundborne vibration during construction.	LS	LS	LSM	NI	NI	LSM	LSM	LSM	LSM	NI	LS	NI	NI	LS	LS	LS	LS	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.15-1a: Avoidance and Vibration Monitoring for Pipeline Installation in the Presidio of Monterey Historic District, Downtown Monterey, and the Lapis Sand Mining Plant Historic District.	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-		
4.12-3: Vibration Reduction Measures.	-	-	-	-	-	X	X	X	X	-	-	-	-	-	-	-	-		
<b>Impact 4.12-4:</b> Consistency with the construction time limits established by the local jurisdictions.	NI	NI	NI	NI	NI	NI	NI	NI	LSM	NI	LSM	NI	NI	NI	NI	NI	NI	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.	-	-	-	-	-	X	X	-	X	-	X	-	-	-	-	-	-		
<b>Impact 4.12-5:</b> Substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the project during operations.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LSM	LS	LS	LS	LSM	LS	LS	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.12-5: Stationary-Source Noise Controls.	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-		

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Impact 4.12-6:</b> Expose people to or generate operational noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during operation.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	NI	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Cumulative impacts related to noise and vibration.</b>										<b>SU</b>									
<b>Section 4.13: Public Services and Utilities</b>																			
<b>Impact 4.13-1:</b> Disrupt or relocate regional or local utilities during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LM	LSM	LSM	LSM	LSM	LSM	LSMS	LSM
<i>Mitigation Measures</i>																			
4.13-1a: Locate and Confirm Utility Lines.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4.13-1b: Coordinate Final Construction Plans with Affected Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4.13-1c: Safeguard Employees from Potential Accidents Related to Underground Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4.13-1d: Emergency Response Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4.13-1e: Notify Local Fire Departments.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4.13-1f: Ensure Prompt Reconnection of Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Impact 4.13-2:</b> Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																			
4.13-2: Construction Waste Reduction and Recycling Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Impact 4.13-3:</b> Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during operations.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	NI	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.13-4:</b> Result in effects from construction of new wastewater treatment or conveyance facilities or the expansion of existing facilities, exceed wastewater treatment requirements of the Central Coast RWQCB, or result in a determination by the wastewater treatment provider that it has inadequate treatment or outfall capacity to serve the project	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																			
4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Impact 4.13-5:</b> Increased corrosion of the MRWPCA outfall and diffuser as a result of brine discharge associated with project operations.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<i>Mitigation Measures</i>																			
4.13-5a: Protective Lining, Routine Inspections, and As-Needed Repairs to Offshore Segment of MRWPCA Outfall and Diffuser.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.13-5b: Evaluation of Land Segment of MRWPCA Ocean Outfall and Protective Lining, If Needed.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to public services and utilities.</b>																			
<b>LS</b>																			
<b>Section 4.14: Aesthetic Resources</b>																			
<b>Impact 4.14-1:</b> Construction-related impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Improvement Measures</i>																			
4.14-1: Maintain Clean and Orderly Construction Sites.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.14-2:</b> Temporary sources of substantial light or glare during construction.	LSM	LS	LSM	LSM	LSM	LSM	LSM	LSM	NI	LSM	NI	LSM	NI	NI	NI	NI	NI	NI	<b>LSM</b>
<i>Mitigation Measures</i>																			
4.14-2: Site-Specific Construction Lighting Measures.	X	-	X	X	X	X	X	-	X	-	X	-	-	-	-	-	-	-	
<b>Impact 4.14-3:</b> Permanent impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LS	LS	NI	NI	NI	NI	NI	NI	NI	LSM	LS	NI	LS	NI	NI	LS	LS	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.14-3a: Facility Design.	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
4.14-3b: Facility Screening.	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	
<b>Impact 4.14-4:</b> Permanent new sources of light or glare.	NI	LS	NI	NI	NI	NI	NI	NI	NI	LS	LSM	NI	NI	NI	NI	LSM	NI	<b>LSM</b>	
<i>Mitigation Measures</i>																			
4.14-4: Outdoor and Security Lighting.	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-		
<b>Cumulative impacts related to aesthetic resources.</b>																			
<b>LS</b>																			
<b>Section 4.15: Cultural and Paleontological Resources</b>																			
<b>Impact 4.15-1:</b> Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5 during construction.	NI	NI	LSM	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	<b>LSM</b>
<i>Mitigation Measures</i>																			
4.15-1a: Avoidance and Vibration Monitoring for Pipeline Installation in the Presidio of Monterey Historic District, Downtown Monterey, and the Lapis Sand Mining Plant Historic District.	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	
4.15-1b: Special Construction Techniques to Preserve Lapis Siding.	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**TABLE ES-3 (Continued)**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Impact 4.15-2:</b> Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5 of the CEQA Guidelines during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																			
4.15-2a: Establish Archaeologically Sensitive Areas.	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	X	X	
4.15-2b: Inadvertent Discovery of Cultural Resources.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.15-3:</b> Directly or indirectly destroy a unique paleontological resource or site, or unique geological feature during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.15-4:</b> Disturbance any human remains, including those interred outside of formal cemeteries, during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>																			
4.15-4: Inadvertent Discovery of Human Remains.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Cumulative impacts related to cultural and paleontological resources.</b>										<b>LS</b>									
<b>Section 4.16: Agriculture and Forestry Resources</b>																			
<b>Impact 4.16-1:</b> Permanently or temporarily covert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	NI	NI	LSM	LSM	LSM	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																			
4.16-1: Minimize Disturbance to Farmland.	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.16-2:</b> Conflicts with existing zoning for agricultural uses or with Williamson Act contracts.	NI	NI	LSM	LSM	LSM	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																			
4.16-1: Minimize Disturbance to Farmland.	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.16-3:</b> Otherwise change the existing environment such that farmland is converted to non-agricultural use.	NI	NI	LSM	LSM	LSM	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>																			
4.16-3: Measures to Minimize Indirect Effects on Agricultural Land.	-	-	X	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to agricultural and forestry resources.</b>										<b>LS</b>									
<b>Section 4.17: Mineral Resources</b>																			
<b>Impact 4.17-1:</b> Loss of availability of known mineral resources or locally important mineral resource recovery sites.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to mineral resources.</b>										<b>LS</b>									

**TABLE ES-3 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	Salinas Valley Return PL	Desalinated Water PL	Transmission Main	Transfer PL	Monterey PL	Terminal Reservoir/ ASR Pump Station	ASR-5 and ASR-6 Wells	ASR Conveyance PLs and ASR Pump-to-Waste PL	ASR Settling Basin	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Valley Greens Pump Station (Option 1)	Valley Greens Pump Station (Option 2)	Overall Impact Significance Determination for Proposed Project	
<b>Section 4.18: Energy Conservation</b>																			
<b>Impact 4.18-1:</b> Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during project construction.	<b>LSM</b>																		
<i>Mitigation Measures</i>																			
4.18-1: Construction Equipment Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.10-1c: Idling Restrictions.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>Impact 4.18-2:</b> Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during project operations.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Impact 4.18-3:</b> Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand during project operations.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to energy resources.</b>										<b>LS</b>									
<b>Section 4.19: Population and Housing</b>																			
<b>Impact 4.19-1:</b> Induce substantial population growth directly (for example, by resulting in the need for additional workforce to support project construction and operations).	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	<b>LS</b>
<i>Mitigation Measures</i>																			
None required.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Cumulative impacts related to population and housing.</b>										<b>SU</b>									
<b>Chapter 8: Growth-Inducement Potential and Secondary Effects of Growth</b>																			
<b>Impact 8-1:</b> Secondary effects of planned growth	<b>SU</b>																		
<b>Categories of Impact Significance:</b> NI = No Impact LS = Less than Significant impact, no mitigation required LSM = Less than Significant impact with Mitigation SU = Significant and Unavoidable SUM = Significant and Unavoidable, even with implementation of Mitigation																			

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## ES.5 Description of MPWSP Variant

CalAm's Application A.12-04-019 also includes a variation of the project (MPWSP Variant or project variant, see **Figure ES-3**) that would be capable of meeting the total demand of 15,296 afy as well as all other project objectives by combining a reduced-capacity desalination plant (a 6.4-mgd plant instead of the 9.6-mgd plant proposed under the project) with a water purchase agreement for 3,500 afy of product water from the MRWPCA's proposed Pure Water Monterey Groundwater Replenishment (GWR) project. (The GWR project is evaluated in a separate Draft EIR that has been prepared by the MRWPCA and was released for public review in April 2015.) This EIR evaluates the impacts of both the proposed project and the MPWSP Variant. Under the MPWSP Variant, the total water produced by the MPWSP Desalination Plant would be reduced (from 9,752 to 6,252 afy) compared to the proposed project. The MPWSP Variant would require fewer subsurface slant wells for the Seawater Intake System. All of CalAm's proposed facilities located south of Reservation Road would be identical under both project scenarios. Chapter 6, MPWSP Variant, describes and analyzes the project variant, including the facilities that would be owned and operated by CalAm, as well as the facilities associated with the GWR project that would be owned and operated by the MRWPCA and other entities. Chapter 6 also compares the overall impacts of the project variant against the impacts of the proposed project.

The GWR project includes the collection of a variety of new source waters and conveyance of that water to the Regional Wastewater Treatment Plant (Regional Plant) for treatment and recycling. The water would then be used for two primary purposes: replenishment of the Seaside Groundwater Basin and additional recycled water supply for agricultural irrigation in northern Salinas Valley (both described below).

The Regional Plant is located 2 miles north of the City of Marina and is operated by the MRWPCA. The Regional Wastewater Treatment Plant currently collects wastewater and some stormwater from its eleven member service area, and treats a large portion of this incoming flow at a tertiary treatment standard that enables it to be used for unrestricted agricultural irrigation purposes in the northern Salinas Valley. Flow that is not sent to the tertiary treatment system is discharged through an outfall to Monterey Bay after receiving secondary treatment.

The new source waters would supplement the existing incoming wastewater flows, and would include the following: 1) water from the City of Salinas agricultural wash water system, 2) stormwater flows from the southern part of Salinas and the Lake El Estero facility in Monterey, 3) surface water and agricultural tile drain water that is captured in the Reclamation Ditch and Tembladero Slough, and 4) surface water and agricultural tile drain water that flows in the Blanco Drain. Most of these new source waters would be combined within the existing wastewater collection system before arriving at the Regional Plant; water from Blanco Drain would be conveyed on its own directly to the Regional Plant.

The GWR project would also include a drought reserve component to support use of the new supply for crop irrigation during dry years. The GWR project would provide for an additional 200 afy of advanced treated water that would be injected in the Seaside Basin in wet and normal years for up to five consecutive years. This will result in a “banked” drought reserve totaling up to 1,000 af. CalAm would be able to extract the banked water in dry years to make up the difference to its supplies, such that its extractions and deliveries would not fall below 3,500 afy. The source waters that are not sent to the advanced treatment facility during dry years would be sent to the Salinas Valley Reclamation Plant to increase supplies for the Castroville Seawater Intrusion Project.

The GWR project requires modifications to existing facilities and construction of new physical facilities, briefly listed below.

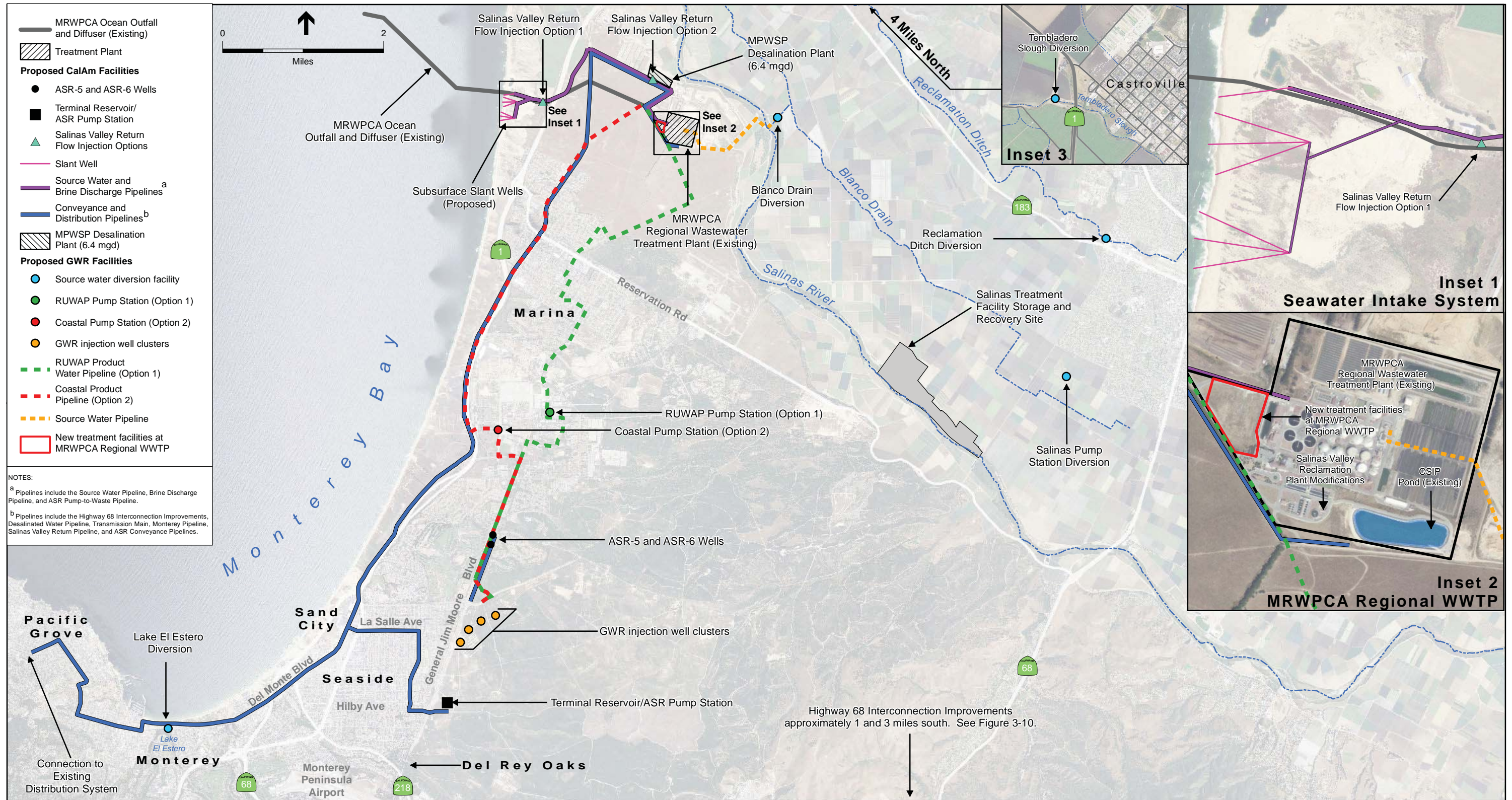
- **Source water diversion and storage.** New facilities will be required to divert and convey the new source waters through the existing municipal wastewater collection system and to the Regional Plant.
- **Treatment facilities at Regional Plant.** A new advanced water treatment plant will be constructed at the Regional Wastewater Treatment Plant site. This facility will include a state-of-the-art treatment system that uses multiple membrane “barriers” to purify the water, product water stabilization to prevent pipe corrosion due to water purity, a pump station, and a brine and wastewater mixing facility. There will also be modifications to the Salinas Valley Reclamation Plant.
- **Product water conveyance.** New pipelines, a pump station and appurtenant facilities will be constructed to move the product water from the Regional Plant to the Seaside Groundwater Basin for injection.
- **Injection well facilities.** The injection facilities would include new wells (in the shallow and deep aquifers), back-flush facilities, pipelines, electricity/ power distribution facilities, and electrical/motor control buildings.
- **Distribution of groundwater from Seaside Basin.** A new CalAm water distribution system pipeline is needed to deliver the extracted groundwater to CalAm customers.

Construction of the GWR project is anticipated to require approximately 18 to 21 months, and the project is currently planned for initial operation by late 2017. MRWPCA is currently evaluating the use of alternative construction approaches, such as design-build, to expedite the construction schedule.

## ES.6 MPWSP Variant Impact Summary

Chapter 6, MPWSP Variant, evaluates the environmental effects of implementing the project variant and presents mitigation measures that would reduce potentially significant impacts to less than-significant levels, when feasible. A summary of impacts and mitigation measures associated with the proposed project and the project variant is provided in **Table ES-4**.







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**TABLE ES-4  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.2 Geology, Soils, and Seismicity</b>				
<p><b>Impact 4.2-1:</b> Increased soil erosion or loss of topsoil during construction.</p>	<p><b>LSM</b> Ground disturbance activities (i.e., vegetation removal, grading, excavation, etc.) during construction could result in increased soil erosion or loss of topsoil. All construction activities would be required to comply with the National Pollution Discharge Elimination System (NPDES) Construction General Permit. The permit would require that a Stormwater Pollution Prevention Program (SWPPP) be prepared that includes Best Management Practices (BMPs) to manage runoff and prevent soil erosion during construction. Construction activities would also be required to comply with the Monterey County Grading Ordinance and Monterey County Erosion Control Ordinance. Compliance with these requirements would ensure the impact from construction-related soil erosion is less than significant.</p> <p>The MPWSP Desalination Plant and Valley Greens Pump Station (both site options) are not located in areas with well-developed soil horizons and, therefore, no impact related to loss of topsoil would occur at these sites. Based on the project description information available at the time of this analysis, all other proposed project facilities could require ground-disturbing activities in areas with sensitive natural communities and/or on agricultural lands. The impact related to loss of topsoil would be significant for these sites. However, the impact would be reduced to a less-than-significant level for all sites with implementation of the prescribed mitigation measures.</p>	<p><b>MM 4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.</b> <b>MM 4.16-3: Measures to Minimize Indirect Effects on Agricultural Lands.</b></p>	<p><b>LSM</b> The MPWSP Variant would have a similar potential for construction-related soil erosion and loss of topsoil impacts as the proposed project. While fewer CalAm facilities would be constructed, the addition of GWR facilities would result in an overall increase in the amount of soil that would be disturbed, and therefore would increase the potential to result in soil erosion and loss of topsoil. The combined impact would be mitigated to a less-than-significant level.</p> <p><u>CalAm Facilities:</u> Temporary construction-related soil erosion and loss of topsoil impacts at the CEMEX sand mining facility would be slightly decreased when compared to the proposed project because there would be less ground disturbance associated with implementation of the subsurface slant wells (seven slant wells would be constructed compared to ten under the proposed project). The impact from construction of all other CalAm facilities would be identical to the proposed project. Overall, the impact of the CalAm facilities under the MPWSP Variant would essentially be the same as those of the proposed project.</p> <p><u>GWR Facilities:</u> Construction could result in soil erosion or loss of topsoil due to ground disturbance and construction at all project sites; however construction would not result in substantial soil erosion or the loss of topsoil due to local requirements for preparation and implementation of erosion control plans and state requirements for implementation of a SWPPP. Impacts related to soil erosion or loss of topsoil would be less than significant.</p>	<p>None required.</p>
<p><b>Impact 4.2-2:</b> Exposure of people or structures to substantial adverse effects related to fault rupture.</p>	<p><b>LS</b> The proposed project would not alter the seismic environment or increase the risk of fault rupture. None of the proposed facilities are located within an Alquist-Priolo Earthquake Fault Zone (i.e., on a State-recognized active fault trace). There is evidence of Holocene displacement along faults that traverse the Monterey Pipeline, Transmission Main, the Valley Greens Pump Station (site Option 1), and the Ryan Ranch-Bishop Interconnection Improvements, indicating that these faults may indeed be active. However, because these segments are concealed beneath sediments where they cross the proposed project facilities and the Holocene displacement is located a sufficient distance from these facilities, the potential for these facilities to be damaged by surface fault rupture is considered low. The impact is less than significant.</p> <p>None of the other project facilities are traversed by fault traces. Therefore, no impact would result.</p>	<p>None required.</p>	<p><b>LS</b> Under the MPWSP Variant, impacts from fault rupture would be identical to those of the proposed project. The GWR facilities would not add impacts from exposure to fault rupture because no GWR facilities would be located on any fault traces. The combined impact would be less than significant.</p> <p><u>CalAm Facilities:</u> The potential for the CalAm facilities under the MPWSP Variant to be damaged by surface fault rupture would be identical to the proposed project. Same as the proposed project, the Monterey Pipeline, Transmission Main, the Valley Greens Pump Station (site Option 1), and the Ryan Ranch-Bishop Interconnection Improvements would result in a less than significant impact related to fault rupture and no impact would result from implementation of all other CalAm facilities.</p> <p><u>GWR Facilities:</u> None of the GWR facilities of the MPWSP Variant would be located on any fault traces and would not be subject to potential fault rupture. No impact would result from implementation of GWR facilities of the MPWSP Variant.</p>	<p>None required.</p>
<p><b>Impact 4.2-3:</b> Exposure of people or structures to substantial adverse effects related to seismically-induced groundshaking.</p>	<p><b>LS</b> It is likely that the structural elements of the MPWSP would be subjected to a moderate to strong earthquake at least once during its operational life. Damage from an earthquake could result in temporary water service disruptions. However, completion of a comprehensive design-level geotechnical investigation, adherence to the current California Building Code, and local ordinances laws regulating construction and the application of proven seismic design criteria as standard engineering practice, would ensure that project facilities are designed to withstand seismic events without sustaining substantial damage or collapsing.</p>	<p>None required.</p>	<p><b>LS</b> The MPWSP Variant would result in less than significant impacts related to exposure of people or structures to seismically-induced groundshaking. None of the facilities would result in a substantial risk of loss, injury or death. The combined impact would be less than significant.</p> <p><u>CalAm Facilities:</u> The impact of the CalAm facilities related to exposure of people or structures to seismically-induced groundshaking would be the same as that of the proposed project. Same as the proposed project, completion of a comprehensive design-level geotechnical investigation, adherence to the current California Building Code, and local ordinances laws regulating construction and the application of proven seismic design criteria as standard engineering practice, would ensure that project facilities are designed to withstand seismic events without sustaining substantial damage or collapsing.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.2 Geology, Soils, and Seismicity (cont.)</b>				
<b>Impact 4.2-3 (cont.)</b>			<p><u>GWR Facilities:</u></p> <p>Upon completion of construction, all of the GWR facilities of the MPWSP Variant would be subject to seismic shaking during an earthquake. Completion of a design-level geotechnical investigation, adherence to the current California Building Code, and local ordinances laws regulating construction and the application of proven seismic design criteria as standard engineering practice, would ensure that the facilities would be designed and built to minimize risk and degree of damage. Damage due to seismic shaking could result in temporary cessation of project operations until repairs are completed, but the effects of seismic groundshaking would not result in a substantial risk of loss, injury, or death or result in a significant impact.</p>	
<b>Impact 4.2-4:</b> Exposure of people or structures to substantial adverse effects related to liquefaction and lateral spreading.	<p><b>LS</b></p> <p>The proposed subsurface slant wells, MPWSP Desalination Plant, Source Water Pipeline, and Valley Greens Pump Station (both site options) would be located on soils with a moderate or high potential for liquefaction. All other project facilities are located in areas with a low liquefaction potential. Geotechnical investigations are being prepared for all project facilities and final facility design would incorporate any geotechnical recommendations for liquefaction hazards. Compliance with Monterey County requirements for geotechnical studies, adherence with standard engineering practices and construction methods, and implementation of the geotechnical design recommendations would ensure the impact is less than significant.</p>	None required.	<p><b>LS</b></p> <p>The MPWSP Variant would have a similar potential to expose people or structures to substantial adverse effects related to liquefaction and lateral spreading as the proposed project. While fewer CalAm facilities would be constructed, the addition of GWR facilities would result in an overall increase in the number of sites that would be subject to liquefaction. Damage from an earthquake could result in temporary cessation of project operations until repairs are completed, but the effects of seismic liquefaction would not result in a substantial risk of loss, injury, or death or result in a significant impact.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm-owned facilities of the MPWSP Variant to expose people or structures to substantial adverse effects related to liquefaction and lateral spreading would be slightly lower than the proposed project because fewer slant wells (seven slant wells versus ten slant wells under the proposed project) would be constructed. The impact from construction of all other CalAm facilities would be identical to the proposed project. Overall, the impact of the CalAm facilities under the MPWSP Variant would essentially be the same as those of the proposed project.</p> <p><u>GWR Facilities:</u></p> <p>Upon completion of construction, all the source water diversion sites, except for Lake El Estero Diversion, could be subject to liquefaction. Completion of a design-level geotechnical investigation, adherence to the current California Building Code, and local ordinances laws regulating construction and the application of proven seismic design criteria as standard engineering practice, would ensure that the facilities would be designed and built to minimize risk and degree of damage due to liquefaction. Damage from an earthquake could result in temporary cessation of project operations until repairs are completed, but the effects of seismic liquefaction would not result in a substantial risk of loss, injury, or death or result in a significant impact.</p>	None required.
<b>Impact 4.2-5:</b> Exposure of people or structures to substantial adverse effects related to landslides.	<p><b>LS</b></p> <p>Only the Main System-Hidden Hills Interconnection Improvements would be located in an area with a moderate to high susceptibility to landslides. However, there are no existing active landslides in the area and these improvements would not exacerbate an otherwise unstable slope condition. Furthermore, this area would be evaluated during the project geotechnical evaluation and, if potentially unstable slope conditions exist, the geotechnical recommendations from the evaluation would be incorporated into final design. As a result, the impact is less than significant.</p> <p>All other project components would be located in relatively flat to gently-sloping topography and would therefore have a low to no susceptibility to landslides. No impact would result from implementation of all other project components.</p>	None required.	<p><b>LS</b></p> <p>Under the MPWSP Variant, impacts from exposure of people or structures to substantial adverse effects related to landslides would be identical to those of the proposed project. The GWR facilities would not add impacts from exposure of people or structures to substantial adverse effects related to landslides because GWR facilities would be located in relatively flat to gentle sloping topography. The combined impact would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm-owned facilities of the MPWSP Variant to expose people or structures to substantial adverse effects related to landslides would be identical to the proposed project. Like the proposed project, implementation of the geotechnical recommendations from the geotechnical evaluation would ensure landslide impacts associated with the Main System-Hidden Hills Interconnection Improvements are less than significant and no impact would result from implementation of all other CalAm facilities because all other CalAm facilities would be sited in areas with low or no susceptibility to landslides.</p>	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.2 Geology, Soils, and Seismicity (cont.)</b>				
<b>Impact 4.2-5</b> (cont.)			<p><u>GWR Facilities:</u> All proposed GWR facilities of the MPWSP Variant would be located in relatively flat to gently-sloping topography, and all sites have been mapped as having a low susceptibility to landslides. No impact would result from implementation of any GWR facilities.</p>	
<b>Impact 4.2-6:</b> Exposure of people or structures to substantial adverse effects related to coastal erosion and bluff retreat caused by sea level rise.	<p><b>LSM</b> Coastal erosion modeling conducted for the subsurface slant wells and Monterey Pipeline indicates these facility components could be subject to coastal erosion hazards. The well casings and concrete wellhead vault for the northernmost subsurface slant well cluster could become exposed by the year 2040 and contribute to accelerated and/or exacerbated natural rates of coastal erosion, scour, and dune retreat that could alter the natural coastal environment. The impact for the northernmost well cluster would be significant but would be reduced to a less-than-significant level with implementation of the prescribed mitigation. The other eight slant wells (i.e., the other two slant well clusters) would not become exposed during their operational life. Therefore, the impact would be less than significant for the remaining slant wells.</p> <p>The modeling results also indicate there is a potential for the Monterey Pipeline to become undermined and exposed sometime around 2060. However, this significant impact would be reduced to a less-than-significant level with implementation of the prescribed mitigation.</p> <p>None of the other project components are close enough to the coast to be vulnerable to coastal retreat. Therefore, there would be no impact.</p>	<p><b>MM 4.2-6a: Slant Well Abandonment Plan</b> <b>MM 4.2-6b: Monterey Pipeline Deepening</b></p>	<p><b>LSM</b> Under the MPWSP Variant, impacts from exposure of people or structures to substantial adverse effects related to coastal retreat would be reduced compared to those of the proposed project because fewer CalAm facilities would be constructed in locations subject to coastal retreat. The GWR facilities would not add impacts from exposure of people or structures to substantial adverse effects related to coastal retreat because GWR facilities would not be constructed in locations subject to coastal retreat. The combined impact would be less than significant with mitigation.</p> <p><u>CalAm Facilities:</u> Under the MPWSP Variant, the potential for the CalAm facilities to expose people or structures to substantial adverse effects related to coastal retreat would be reduced when compared to the proposed project because the northernmost slant well cluster would only include one slant well (as opposed to two slant wells under the proposed project). Like the proposed project, with implementation of the prescribed mitigation, the impact at the northernmost well cluster would be reduced to a less-than-significant level. Same as the proposed project, the other two slant well clusters would be set back and would not become exposed during the operational life of the slant wells. Therefore, the impact would be less than significant for the remaining slant wells.</p> <p>The potential for the Monterey Pipeline to become undermined and exposed in the future would be identical to the proposed project. Overall, the impact of the CalAm facilities would be lower when compared to the proposed project, but the significance determination would remain less than significant with mitigation.</p> <p><u>GWR Facilities:</u> None of the proposed GWR facilities of the MPWSP Variant would be located close enough to the coast such that they would be vulnerable to coastal retreat or erosion before approximately the year 2100. For more information, see the report titled “Analysis of Historic and Future Coastal Erosion with Sea Level Rise” (ESA, 2014). The GWR facilities would have no impact related to coastal retreat caused by sea level rise.</p>	None required.
<b>Impact 4.2-7:</b> Exposure of people or structures to substantial adverse effects related to land subsidence.	<p><b>LS</b> Because the subsurface slant wells would draw water from coastal aquifers, seawater would replace the water pumped from the slant wells. The continuous replacement of water would keep the pore spaces between the grains filled with water and prevent land subsidence. Therefore, no impact would result.</p> <p>The ASR-5 and ASR-6 Wells would be screened in the Santa Margarita Formation, which is made of sandstone that would be expected to support the granular structure during groundwater pumping. Water injected into the Seaside Groundwater Basin would be extracted in the same year, so ASR operations would not result in a net lowering of groundwater levels. Further, as a result of the adjudication of the Seaside Groundwater Basin, CalAm must provide 700 af of in-lieu recharge to the Seaside Groundwater Basin for the first 25 years of the proposed project, which would result in an overall increase in groundwater elevations in the Seaside Groundwater Basin. The subsidence impact would be less than significant.</p>	None required.	<p><b>LS</b> The MPWSP Variant would result in less-than-significant impacts related to land subsidence like the proposed project. No impact would result from operation of the subsurface slant wells and none of the other facilities would result in a net lowering of groundwater levels. The combined impact would be less than significant</p> <p><u>CalAm Facilities:</u> Under the MPWSP Variant, the potential for the CalAm facilities to result in substantial adverse effects related to land subsidence would be similar to the proposed project. Regardless of the number of subsurface slant wells, no impact would result from operation of the subsurface slant wells.</p> <p>Although the Seaside Groundwater Basin ASR system would be operated differently to accommodate extraction of water from the GWR project, like the proposed project, the potential subsidence impact related to operation of the ASR-5 and ASR-6 Wells and ASR operations as a whole would not result in a net lowering of groundwater levels. Therefore, like the proposed project, the subsidence impact would be less than significant.</p>	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.2 Geology, Soils, and Seismicity (cont.)</b>				
<b>Impact 4.2-7</b> (cont.)			<p><u>GWR Facilities:</u> Adverse effects of land subsidence due to the proposed GWR facilities of the MPWSP Variant would be less than significant because the amount of groundwater stored in the Seaside Groundwater Basin would not change on an annual average basis. Specifically, the net new extractions would not exceed the net new injections under the proposed GWR facilities of the MPWSP Variant on an annual average basis. In 2011, the Seaside Basin Watermaster contracted with Central Coast Surveyors to conduct an analysis of existing land subsidence in the Seaside Groundwater Basin and they found no land subsidence appears to have occurred (Central Coast Surveyors, Position Data For Wells in the Seaside Basin, July 2011)</p>	
<b>Impact 4.2-8:</b> Exposure of people or structures to substantial adverse effects related to expansive soils.	<p><b>LS</b> The Valley Greens Pump Station (both site options), Main System-Hidden Hills Interconnection Improvements, and Ryan Ranch–Bishop Interconnection Improvements would be constructed on soils with a moderate to high expansion or linear extensibility potential. However, preparation of a geotechnical investigation and implementation of the geotechnical recommendations, as well as California Building Code and American Water Works Association (AWWA) standards for pipelines would ensure the impact is less than significant.</p> <p>No impact related to expansive soils would result from implementation of all other project components because the facilities would be sited in soils with a low linear extensibility potential.</p>	None required.	<p><b>LS</b> The MPSWP Variant would have a similar potential impact related to expansive soils as the proposed project. While the same CalAm facilities would be constructed in areas with expansive soils, the addition of GWR facilities would result in an overall increase in the number of sites with expansive soils. Implementation of recommendations in the geotechnical studies would result in less-than-significant impacts at all sites and the combined impact for the MPSWP Variant would be less than significant.</p> <p><u>CalAm Facilities:</u> The impact of the CalAm facilities related to expansive soils would be identical to the proposed project. Same as the proposed project, preparation of a geotechnical investigation and implementation of the geotechnical recommendations, as well as California Building Code and AWWA standards for pipelines would ensure the impact is less than significant for the Valley Greens Pump Station (both site options), Main System-Hidden Hills Interconnection Improvements, and Ryan Ranch–Bishop Interconnection Improvements. No impact would result from all other CalAm facilities.</p> <p><u>GWR Facilities:</u> There is the potential for soil types at the project sites to exhibit expansive soil properties in areas with soils containing clays, including the Salinas River area and alluvial areas. Site-specific geotechnical engineering studies, including subsurface exploration and laboratory testing, would be performed during project design to further assess site soils in accordance with state and local requirements. These studies would provide design details for facility plans in response to soils conditions present. Implementation of recommendations in the geotechnical studies, which is applicable to all GWR facility components, would result in less-than-significant impacts.</p>	None required.
<b>Impact 4.2-9:</b> Exposure of structures to substantial adverse effects related to corrosive soils.	<p><b>LS</b> Project components that would be located on or in soils with moderate to high concrete and unprotected steel corrosion potential include the MPWSP Desalination Plant, Terminal Reservoir, ASR Pump Station, ASR-5 and ASR-6 Wells, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, and Ryan Ranch–Bishop Interconnection Improvements. The final geotechnical investigation would evaluate the presence of corrosive soils and, if needed, would provide recommendations that would be incorporated into final project design. This process would ensure the impact is less than significant.</p> <p>No impact related to corrosive soils would result from implementation of all other project components because the facilities would be located in sandy soils with a low corrosivity potential.</p>	None required.	<p><b>LS</b> The MPSWP Variant would have a similar potential impact related to corrosive soils as the proposed project. While the same CalAm facilities would be constructed in areas with corrosive soils, the addition of GWR facilities would result in an overall increase in the number of sites with corrosive soils. Implementation of recommendations in the geotechnical studies would result in less-than-significant impacts at all sites and the combined impact for the MPSWP Variant would be less than significant.</p> <p><u>CalAm Facilities:</u> The impact of the CalAm facilities related to corrosive soils would be identical to the proposed project. Same as the proposed project, implementation of the geotechnical recommendations from the final geotechnical investigation would address the corrosion potential at the MPWSP Desalination Plant, Terminal Reservoir, ASR Pump Station, ASR-5 and ASR-6 Wells, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, and Ryan Ranch–Bishop Interconnection Improvements. No impact related to corrosive soils would result from implementation of all other CalAm facilities.</p>	None required.



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.2 Geology, Soils, and Seismicity (cont.)</b>				
<b>Impact 4.2-9</b> (cont.)			<u>GWR Facilities:</u> Proposed GWR facilities of the MPWSP Variant would be located on or in soils that have moderate to high corrosivity. The final geotechnical investigation would evaluate the presence of corrosive soils and, if needed, would provide recommendations that would be incorporated into final project design. This process would ensure the impact is less than significant.	
<b>Impact GS-6:</b> Hydro-collapse of soils from well injection.  <i>[Applies to GWR facilities only]</i>	Not applicable to the MPWSP because the proposed project does not include vadose zone (shallow) injection wells.	None required.	<b>LS</b> <u>CalAm Facilities:</u> Not applicable to the CalAm facilities under the MPWSP Variant because the CalAm facilities would not include vadose zone (shallow) injection wells. <u>GWR Facilities:</u> Collapsible soil is broadly defined as loose and cemented soil with low moisture content that is susceptible to a large and sudden reduction in volume upon wetting, with no increase in vertical stress. The process of soil collapse upon wetting is referred to as hydro-collapse. Another type of collapse can occur in saturated soil bearing soluble minerals when subjected to continuous leaching. The eolian deposits that underlie the proposed location for the Injection Well Facilities could be susceptible to hydro-collapse if large quantities of water are injected into the ground in the surficial soils at the site. Based on the depth to groundwater and minor groundwater mounding, the risk of hydro-collapse of soils due to injection of water into the Seaside Groundwater Basin would be less than significant based on the findings of the preliminary geotechnical report (Ninyo & Moore, 2014).	None required
<b>4.3 Surface Water Hydrology and Water Quality</b>				
<b>Impact 4.3-1:</b> Degradation of water quality associated with increased soil erosion and inadvertent releases of toxic chemicals during general construction activities.	<b>LS</b> Earthmoving activities associated with project construction could result in soil erosion and the migration of eroded soil and sediment via stormwater runoff to downgradient water bodies and storm drains. This could degrade water quality in the receiving water bodies, including the Salinas River and Monterey Bay. Construction activities could also result in the inadvertent release of hazardous construction chemicals such as adhesives, solvents, fuels, and petroleum lubricants that, if not managed appropriately, could adhere to soil particles, become mobilized by rain or runoff, and degrade water quality in downstream water bodies. Project construction activities would disturb more than one acre of soil, and therefore would be subject to the NPDES Construction General Permit requirements.  In accordance with the NPDES Construction General Permit, the construction contractor(s) would implement measures to control soil erosion, manage runoff, and protect water quality. As a result, the impact would be less than significant for all project components.	None required.	<b>LS</b> When compared to the proposed project, implementation of the MPWSP Variant would result in a substantial increase in construction-related ground disturbance. However, mandatory compliance with the NPDES Construction General Permit would protect water quality during construction of the CalAm and GWR facilities. Thus, the impact would be less than significant for the MPWSP Variant. <u>CalAm Facilities:</u> The potential for construction of the CalAm facilities to degrade water quality from increased soil erosion and inadvertent releases of toxic chemicals would be similar to the proposed project, but slightly reduced because there would be less ground disturbance and construction activities associated with implementation of the subsurface slant wells (only seven slant wells would be constructed under the MPWSP Variant compared to ten under the proposed project). The impact from construction of all other CalAm facilities would be identical to the proposed project. Although the overall impact would be slightly reduced for the CalAm facilities under the MPWSP Variant, like the proposed project, adherence to the NPDES Construction General Permit requirements would ensure the impact is less than significant. <u>GWR Facilities:</u> Construction of the GWR facilities 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 system alterations, and use of hazardous chemicals.	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.3 Surface Water Hydrology and Water Quality (cont.)</b>				
<p><b>Impact 4.3-2:</b> Degradation of water quality from construction-related discharges of dewatering effluent from open excavations and water produced during well drilling and development.</p>	<p><b>LSM</b> Water produced during drilling and development of the subsurface slant wells and ASR-5 and ASR-6 Wells would be routed to portable holding tanks to allow sediment to settle out, and then percolated into the ground in accordance with the General Waiver of WDRs for Specific Types of Discharges (General Waiver). For the subsurface slant wells, these discharges would be percolated into the ground at the CEMEX active mining area. Water extracted during drilling and development of the ASR-5 and ASR-6 Wells would be percolated into the ground at a 1.4-acre natural depression located east of the intersection between San Pablo Avenue and General Jim Moore Boulevard. The conditions of the General Waiver would ensure the impact is less than significant.</p> <p>Construction of all other proposed project components could require dewatering of open excavations. In particular, open-cut trenching, jack-and-bore, and microtunneling for the installation of pipelines could intercept shallow or perched groundwater and require temporary localized dewatering to facilitate construction. Most of the dewatering effluent produced during construction and excavation is considered a low threat and can be discharged to the land or local receiving water provided it complies with the General WDRs for Discharges with a Low Threat to Water Quality (General WDRs). The construction contractor(s) would be required to control, test, and treat the extracted water as needed to minimize or avoid water quality degradation, erosion, and sedimentation in the receiving waters. In certain cases, suspended sediment and/or trace amounts of construction-related chemicals could be present in the dewatering effluent. Discharges of contaminated dewatering effluent to vegetated upland areas or the local storm drain system would result in a significant impact. However, the impact would be reduced to a less-than-significant level with implementation of the prescribed mitigation.</p>	<p><b>MM 4.7-2b: Soil and Groundwater Management Plan.</b></p>	<p><b>LSM</b> When compared to the proposed project, implementation of the MPWSP Variant would involve the drilling and development of additional wells (i.e., the GWR injection wells and the injection wells for the Salinas Valley return flows). Water produced during well drilling and development would be disposed of in accordance with the General Waiver and would prevent significant impacts to water quality. Implementation of the MPWSP Variant would also result in an increase in excavations, increasing the potential to encounter contaminated soil and groundwater. The potential for discharges of contaminated dewatering effluent would be greater under the MPWSP Variant when compared to the proposed project. However, as for the proposed project, with implementation of the prescribed mitigation measure, the impact could be reduced to a less-than-significant level.</p> <p><u>CalAm Facilities:</u> Under the MPWSP Variant, the potential for discharges of water produced during slant well drilling and development to degrade water quality would be reduced when compared to the proposed project because fewer slant wells (seven slant wells versus ten slant wells under the proposed project) would be constructed. Like the proposed project, adherence to the conditions of the General Waiver would ensure the impact is less than significant.</p> <p>The potential for discharges of water produced during drilling and development of the ASR-5 and ASR-6 Wells, and discharges of dewatering effluent from open excavations associated with all other CalAm facilities to degrade water quality would be identical to the proposed project because the facilities would be exactly the same. Like the proposed project, the overall impact would be less than significant with mitigation.</p> <p><u>GWR Facilities:</u> Construction activities for the GWR facilities involving well drilling and development, and dewatering of shallow groundwater from open excavations would generate water requiring disposal. Water produced during well drilling and development would be disposed of in accordance with the General Waiver. General construction dewatering effluent would be disposed of in accordance with the General WDRs. Because all discharges of water produced during GWR well drilling and development, and dewatering of shallow groundwater during construction of GWR facilities would occur in compliance with these regulatory requirements, the overall impact of the GWR facilities would be less than significant.</p>	<p>None required.</p>
<p><b>Impact 4.3-3:</b> Degradation of water quality from discharges of treated water and disinfectant from existing and newly installed pipelines during construction.</p>	<p><b>LS</b> Newly installed pipelines (all proposed pipelines, including and the new pipelines associated the Ryan Ranch-Bishop Interconnection Improvements and Main System-Hidden Hills Interconnection Improvements) would also be disinfected before being put into service. Prior to constructing the connections between existing and new pipelines, segments of existing pipelines would also need to be drained and later disinfected prior to being returned to service. The treated water generated from the draining of existing pipelines and the effluent generated from disinfection of newly installed pipelines would be discharged to the local storm drainage system in accordance with the General WDRs. Compliance with the General WDRs and the conditions therein would protect water quality in receiving water bodies. The impact would be less than significant for all proposed pipelines, the Ryan Ranch-Bishop Interconnection Improvements, and the Main System-Hidden Hills Interconnection Improvements.</p> <p>The subsurface slant wells, MPWSP Desalination Plant, ASR-5 and ASR-6 Wells, Terminal Reservoir/ASR Pump Station, and Valley Greens Pump Station (both site options) are not anticipated to require flushing and generate disinfection effluent prior to being brought online. No impact would result.</p>	<p>None required.</p>	<p><b>LS</b> Compliance with the General WDRs during discharges of treated water drained from existing pipelines and effluent produced during disinfection of pipelines would protect water quality in receiving waters. The overall impact to water quality would be less than significant for the MPWSP Variant.</p> <p><u>CalAm Facilities:</u> The potential for degradation of water quality from discharges of treated water and disinfectant from existing and newly installed pipelines would be identical for the CalAm facilities under the MPWSP Variant because all of the same pipelines would be constructed. This impact would be identical to the proposed project (less than significant).</p> <p><u>GWR Facilities:</u> Like the pipelines that would be installed by CalAm, treated water generated from the draining of existing pipelines and the effluent generated from disinfection of newly installed pipelines for the GWR facilities would be discharged to the local storm drainage system in accordance with the General WDRs. Compliance with the General WDRs and the conditions therein would protect water quality in receiving water bodies. The impact would be less than significant for all GWR pipelines.</p>	<p>None required.</p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.3 Surface Water Hydrology and Water Quality (cont.)</b>				
<p><b>Impact 4.3-4:</b> Violate water quality standards or waste discharge requirements, or degrade water quality as a result of brine discharge from the operation of the MPWSP Desalination Plant.</p>	<p><b>LSM</b></p> <p>Potential water quality impacts resulting from the discharges associated with MPWSP Desalination Plant operations considered two scenarios: (1) brine-only discharges during the dry weather or summer months, and (2) combined discharges of brine combined with treated wastewater flows from the MRWPCA Regional Wastewater Treatment Plant. In general, the availability of treated wastewater effluent for blending with the brine would fluctuate seasonally (higher flows during the wet weather or winter months and low flows during the dry weather) and may not be available for extended periods of the year. The impact was determined based on the Ocean Plan water quality objectives as the significance threshold.</p> <p>The water quality analysis used the best available information and the impact conclusion was based on detected constituents in the discharge streams and water quality data collected from Monterey Bay under CCLEAN to represent source water entering the MPWSP Desalination Plant. Based on the analyses, both the brine-only discharge and combined discharge (with low [0.25 mgd] wastewater flow) were found to result in an exceedance over the water quality objectives for polychlorinated biphenyls (PCBs) and ammonia defined in the Ocean Plan at the edge of the ZID, a significant impact. However, with implementation of the prescribed mitigation the impact would be minimized to a less-than-significant level. Potential secondary impacts that could result from implementation of <b>Mitigation Measure 4.3-4</b> are discussed in Impact 4.3-4 following the description of the mitigation measure.</p>	<p><b>MM 4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.</b></p> <p><i>[See Impact 4.3-4 in Section 4.3, Surface Water Hydrology and Water Quality, for a discussion of the potential secondary impacts of this mitigation measure.]</i></p>	<p><b>LSM</b></p> <p>The water quality impact was studied for the six discharge scenarios resulting from the operation of the MPWSP Variant. Similar to the proposed project, the brine-only and brine-and-low wastewater discharges would result in exceedances in Ocean Plan water quality objectives for PCBs and ammonia. Discharges associated with brine, treated wastewater and GWR-effluent would also exceed Ocean Plan water quality objectives for chlordanes, toxaphene, DDT and TCDD Equivalents. <b>Mitigation Measure 4.3-4</b> would reduce the water quality impact associated with exceedances of the Ocean Plan water quality objectives to less-than-significant. No additional mitigation would be required as a result of the change in operations under the MPWSP Variant. See Section 6.3.1 for more detailed discussion.</p>	<p>None required.</p>
<p><b>Impact 4.3-5:</b> Violate water quality standards or waste discharge requirements for salinity, or degrade water quality from increased salinity as a result of brine discharge from the operation of the MPWSP Desalination Plant.</p>	<p><b>LS</b></p> <p>This impact analysis focuses on whether the brine and the combined discharges (introduced in Impact 4.3-4 above) would exceed the significance threshold for salinity, i.e., result in salinity greater than 2 ppt over ambient salinity levels. The salinity levels are analyzed in the near field (within the ZID) and in the far field (beyond the outer edge of the ZID). The near-field analysis was specifically developed to address the amendment to the Ocean Plan (2014; 2015) that proposes a new salinity standard of not increasing the salinity levels to greater than 2 ppt over ambient salinity. The far-field analysis was developed to address comments received during the proposed project scoping period on the fate and travel path of the brine plume beyond the near field. The brine and combined discharges (discussed in Impact 4.3-4) would result in salinity levels that would be less than 2 ppt greater than ambient salinity. Therefore the impact would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The near-field analysis of salinity levels under the MPWSP Variant indicates that the brine and combined discharges would result in salinity less than 2 ppt above ambient salinity. The project variant would therefore not exceed or violate the salinity standards or degrade water quality in terms of salinity. The impact would be less than significant.</p> <p>The far-field analysis indicated that the plume of the brine-only and blended discharges travels away from the point of discharge with time. Although there were no significance thresholds for salinity beyond the ZID, the salinity of the plumes was estimated to progressively reduce with time and distance from the point of discharge, approaching background salinity levels through dispersion and dilution with the ocean currents. Therefore, the impact of the MPWSP Variant would be less than significant and no mitigation is required.</p> <p>See Section 6.3.1 for more detailed discussion.</p>	<p>None required.</p>
<p><b>Impact 4.3-6:</b> Degradation of water quality due to discharges associated with maintenance of the subsurface slant intake and the ASR injection/extraction wells.</p>	<p><b>LS</b></p> <p>The subsurface slant wells would require periodic maintenance every 5 years. Maintenance would require excavation of the wellhead vaults for access. Mechanical brushes would be lowered into the vaults to clean the well screens using environmentally inert products. It is assumed maintenance of the 10 slant wells would result in an approximately 10 acres of total ground disturbance and would be subject to the NPDES Construction General Permit, including preparation and implementation of a SWPPP. In accordance with the NPDES Construction General Permit, the construction contractor(s) would implement measures to control soil erosion, manage runoff, and protect water quality. The impact would be less than significant for the subsurface slant wells.</p> <p>Water produced during routine (weekly) backflushing of the ASR-5 and ASR-6 Wells would be conveyed to the proposed ASR Settling Basin or the existing Phase I ASR Pump-to-Waste System located at the intersection of General Jim Moore Boulevard and Coe Avenue and percolated into the ground. These discharges would be conducted in accordance with the General Waiver.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>Periodic maintenance of the subsurface slant wells would be conducted in accordance with the NPDES Construction General Permit. Routine backflushing of the ASR-5 and ASR-6 Wells, injection wells for the Salinas Valley return flows, and GWR injection wells would be conducted in accordance with the General Waiver. Mandatory compliance with regulatory requirements would ensure well maintenance activities do not adversely affect water quality. The impact is less than significant for the MPWSP Variant.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for discharges associated with maintenance of the subsurface slant wells to degrade water quality would be reduced under the MPWSP Variant when compared to the proposed project because fewer slant wells (seven slant wells versus ten slant wells under the proposed project) would be constructed. Like the proposed project, adherence NPDES Construction General Permit requirements would ensure the impact is less than significant. Water quality impacts associated with discharges of water produced during routine backflushing of the ASR-5 and ASR-6 Wells would be identical to the proposed project.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.3 Surface Water Hydrology and Water Quality (cont.)</b>				
<b>Impact 4.3-6 (cont.)</b>	Mandatory compliance with regulatory requirements would ensure periodic maintenance of the slant wells and routine maintenance of the ASR injection/extraction wells would have a less than significant water quality impact.		Overall, the CalAm facilities under the MPWSP Variant would result in reduced impacts when compared to the proposed project. However, the significance determination would be the same (less than significant).  <u>GWR Facilities:</u> Operation of the GWR injection wells 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.	
<b>Impact 4.3-7:</b> Alteration of drainage patterns such that there is a resultant increase in erosion, siltation, or the rate or amount of surface runoff.	<b>LS</b> Implementation of the MPWSP Desalination Plant, ASR-5 and ASR-6 Wells, and Terminal Reservoir/ASR Pump Station would create new impervious surfaces that could increase peak stormwater flows, cause erosion, and increase nonpoint-source pollution in downstream water bodies. However, in accordance with the NPDES municipal stormwater permit, these facilities would be subject to post-construction stormwater management requirements. CalAm would be required to implement post-construction stormwater BMPs into the final site designs, including measures to treat and detain the runoff. Adherence to the municipal permit requirements would ensure the impact related to changes in drainage patterns, increased soil erosion, and siltation would be less than significant impact.  Implementation of the Valley Greens Pump Station and subsurface slant wells would result in a negligible increase in impervious surfaces and would not alter drainage patterns, significantly increase erosion or siltation, or increase surface runoff. The impact for these facilities would also be less than significant.  The proposed pipelines would be constructed below ground and would not increase impervious surfaces or alter drainage patterns. No impact would result from implementation of the proposed pipelines.	None required.	<b>LSM</b> New impervious surfaces associated with aboveground CalAm and GWR facilities would be subject to post-construction stormwater management requirements of the municipal stormwater permit. As a result, the impact would less than significant. However, rapid water fluctuations may induce erosion and sedimentation within the downstream affected reach of the Reclamation Ditch and Tembladero Slough. This is a significant impact that would be reduced to a less-than-significant with the implementation of mitigation.  <u>CalAm Facilities:</u> The total increase in impervious surface area that would result from implementation of the CalAm facilities under the MPWSP Variant would be the same as the proposed project. Therefore, the potential for alteration of drainage patterns and associated increases in soil erosion, siltation, or the rate or amount of surface runoff would be identical to the proposed project. (Note: the reduced number of subsurface slant wells would not affect impervious surface areas because the wellhead vaults would be buried under the sand. The electrical control panel and electrical control building for the subsurface slant wells would be the same size under the MPWSP Variant and the proposed project.) Same as the proposed project, the overall impact is less than significant.  <u>GWR Facilities:</u> Implementation of the GWR facilities would alter existing drainage patterns by increasing impervious surface areas but would not substantially increase the rate or amount of runoff such that it would cause erosion or siltation on- or off-site. During the dry seasons (typically, June through October) proposed diversions of surface water from the Reclamation Ditch would be as much as 80 percent of the flow in that drainage channel and thus rapid water fluctuations may induce erosion and sedimentation within the downstream affected reach of the Reclamation Ditch and Tembladero Slough (except west of the Highway 1 crossing where the tidal backwater effect dominates water level changes and would suppresses these imposed water level changes). This is a significant impact that would be reduced to a less-than-significant with implementation of <b>Mitigation Measure HS-4.</b>	<b>Mitigation Measure HS-4: Management of Surface Water Diversion Operations.</b>
<b>Impact 4.3-8:</b> Alteration of drainage patterns such that there is an increase in flooding on- or offsite or the capacity of the stormwater drainage system is exceeded.	<b>LS</b> New impervious surfaces associated with the proposed aboveground project facilities could increase the amount of surface water runoff from the facility sites and increase peak flows in the stormwater conveyance system.  The MPWSP Desalination Plant, ASR-5 and ASR-6 Wells, and Terminal Reservoir/ASR Pump Station would be subject to the post-construction stormwater management requirements of the municipal stormwater permit and would be required to implement post-construction BMPs into final site designs. With adherence to the post-construction requirements, implementation of these facilities would result in a less than significant impact related to changes in drainage patterns, increased flooding, and exceedance of downstream stormwater drainage system capacity. Implementation of the Valley Greens Pump Station and subsurface slant wells would result in a less than significant impact. No impact would result from implementation of the proposed pipelines.	None required.	<b>LS</b> New impervious surfaces associated with aboveground CalAm and GWR facilities would be subject to post-construction stormwater management requirements of the municipal stormwater permit. As a result, the impact would less than significant for the MPWSP Variant as a whole.  <u>CalAm Facilities:</u> The total increase in impervious surface area that would result from implementation of the CalAm facilities under the MPWSP Variant would be the same as the proposed project. (Note: the reduced number of subsurface slant wells would not affect impervious surface areas because the wellhead vaults would be buried under the sand. The electrical control panel and electrical control building for the subsurface slant wells would be the same size under the MPWSP Variant and the proposed project.) Therefore, the potential for alteration of drainage patterns, associated increases in flooding, and flows in excess of the capacity of the stormwater drainage system would be identical to the proposed project. Same as the proposed project, the overall impact is less than significant.	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.3 Surface Water Hydrology and Water Quality (cont.)</b>				
<b>Impact 4.3-8</b> (cont.)			<p><u>GWR Facilities:</u> Implementation of the GWR facilities would alter existing drainage patterns by increasing impervious surface areas but would not substantially increase the rate or amount of runoff such that it would cause flooding on- or offsite, or exceed the existing storm drainage system capacity</p>	
<b>Impact 4.3-9:</b> Impedance or redirection of flood flows due to the siting of project facilities in a 100-year flood hazard area.	<p><b>LS</b> The subsurface slant wells and portions of the Source Water Pipeline and Monterey Pipeline would be constructed in a 100-year flood hazard area. However, these facilities would be placed underground and would not impede or redirect flood flows. The impact would be less than significant for the subsurface slant wells, Source Water Pipeline, and Monterey Pipeline. No impact would result from implementation of all other proposed project facilities because none of the other project components are located within a 100-year flood hazard area.</p>	None required.	<p><b>LS</b> All CalAm and GWR facilities located in a 100-year flood hazard zone would be located underground and would not impede or redirect flood flows. Therefore, the impact would be less than significant for the MPWSP Variant. <u>CalAm Facilities:</u> The impact related to impedance or redirection of flood flows due to siting of the CalAm facilities in a 100-year flood hazard zone would be the same as the proposed project. Like the proposed project, all CalAm facilities located in a 100-year flood hazard area would be constructed underground and would not impede or redirect flood flows. Same as the proposed project, the overall impact is less than significant. <u>GWR Facilities:</u> Portions of the GWR facilities would be located within a 100-year flood hazard area but would be located below ground and therefore would not impede or redirect flood flows.</p>	None required.
<b>Impact 4.3-10:</b> Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to a tsunami.	<p><b>LS</b> The subsurface slant wells in Marina and portions of the Monterey Pipeline in Monterey and Seaside would be located within a tsunami inundation zone. However, because these facilities would be constructed underground and designed to withstand inundation, they would not be subject to a significant risk of damage from flooding in the event of a tsunami. Because both facilities would, for the most part, be operated remotely, facility operators would not be exposed to significant tsunami hazards.  The impact would be less than significant for the subsurface slant wells and Monterey Pipeline. No impact would result from implementation of all other proposed project facilities because none of the other project components are located within a tsunami inundation zone.</p>	None required.	<p><b>LS</b> The potential to expose people or structures to a significant risk of loss, injury, or death from flooding due to a tsunami would be the same as for the proposed project. <u>CalAm Facilities:</u> The impact of the CalAm facilities under the MPWSP Variant related to significant risk of loss, injury, or death from flooding due to a tsunami would be the same as the proposed project. Like the proposed project, all CalAm facilities located within a tsunami inundation zone would be constructed underground and designed to withstand inundation. Further, because these facilities would, for the most part, be operated remotely, facility operators would not be exposed to significant tsunami hazards. Same as the proposed project, the overall impact is less than significant. <u>GWR Facilities:</u> Implementation of the GWR facilities would not expose people or structures to substantial risk from flooding due to a tsunami.</p>	None required.
<b>Impact 4.3-11:</b> Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise.	<p><b>LS</b> The proposed project could expose project facilities to flooding from sea level rise. The subsurface slant wells, the northernmost portion of the MPWSP Desalination Plant site, Source Water Pipeline, and Monterey Pipeline would be located in areas that could be subject to sea level rise. However, the subsurface slant wells and two pipelines would be constructed underground and designed to withstand inundation. The proposed aboveground facilities at the 40-acre MPWSP Desalination Plant site would be constructed on the upper terrace of the site and at elevations higher than the predicted 2100 sea level elevation. Therefore, the MPWSP Desalination Plant, Source Water Pipeline, and Monterey Pipeline would not be subject to a significant risk of damage from flooding due to sea level rise and the impact would be less than significant for these facilities.  None of the other proposed facilities would be subject to flooding from sea level rise. No impact would result.</p>	None required.	<p><b>LS</b> The potential to expose people or structures to significant risk of loss, injury, or flooding from sea level rise would be the same as for the proposed project. <u>CalAm Facilities:</u> The potential for implementation of the CalAm facilities to expose people or structures to significant risk of loss, injury, or flooding from sea level rise would be the same as the proposed project. Like the proposed project, all CalAm facilities located in areas that could be subject to sea level rise would either be constructed underground or designed to withstand inundation. The proposed aboveground facilities at the MPWSP Desalination Plant site would be constructed at elevations higher than the predicted 2100 sea level elevation. Like the proposed project, the overall impact is less than significant. <u>GWR Facilities:</u> Some GWR facilities may be exposed to flooding due to sea level rise but this exposure would not pose a substantial nor significant risk of loss, injury, or death.</p>	None required.



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.4 Groundwater Resources</b>				
<p><b>Impact 4.4-1:</b> Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during construction.</p>	<p><b>LS</b></p> <p>Providing water to the slant well drilling could be a significant impact if the water was drawn from local groundwater wells and that withdrawal caused local groundwater levels to decrease, thereby damaging or decreasing the well yields in neighboring groundwater supply wells. For the proposed project, water would be purchased by an outside water purveyor and delivered to the drill site when needed by truck; water would not be extracted from local groundwater sources.</p> <p>Water needed for dust suppression, concrete wash-outs, tire washing, and general site maintenance would be purchased from a local water purveyor and delivered to the individual construction site by truck. Construction of these facilities would not require quantities of water over what is typically necessary for construction and groundwater pumping would not be necessary.</p> <p>This impact is less than significant because water needed for construction of wells would not deplete local groundwater supplies.</p> <p>Impacts related to the decrease in recharge are considered in this EIR as operational impacts of the proposed project and are discussed in Impact 4.4-3.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>Under the MPWSP Variant, construction impacts would be similar to those of the proposed project. The number of slant wells would be reduced, but additional injection wells would be constructed in support of the GWR facilities. If well drilling water in large quantities is necessary, it would be purchased by an outside water purveyor and delivered to the drill site when needed by truck; water would not be extracted from local groundwater sources. This impact is less than significant because water needed for construction of wells would not deplete local groundwater supplies.</p> <p><u>CalAm Facilities</u></p> <p>The construction of CalAm facilities for the MPWSP Variant would be similar to the proposed project. Fewer slant wells would be installed, reducing the need for slant well drilling water. The ASR well configuration is the same when compared to the proposed project. Construction water would be required for dust suppression, concrete wash-outs, tire washing, and general site maintenance. Water needed for these operations would be purchased from a local water purveyor and delivered to the individual construction site by truck. Construction of these facilities would not require quantities of water over what is typically necessary for construction and groundwater pumping would not be necessary. Therefore, construction of the CalAm facilities would not adversely impact groundwater supplies and this impact is less than significant. Impacts related to the decrease in recharge are considered in this EIR as operational impacts of the CalAm facilities and are discussed in Impact 4.4-3.</p> <p><u>GWR Facilities:</u></p> <p>Impacts associated with groundwater depletion, levels and recharge during the construction of the GWR facilities would be less than significant. During construction, the GWR facilities would use water for soil compaction and dust control. The amount of water use would be small in relation to overall water resources. At some component sites, there would be new impervious surfaces constructed that may potentially change local recharge characteristics at each site. Along pipelines route, groundwater recharge characteristics would not change because the existing site surfaces would be restored to pre-construction conditions and there would be no increases in the quantity of impervious surfaces and no loss of recharge ability. Where components are located on existing paved areas, no change in impervious surface area and no change in recharge would result. For sites proposing new impervious surfaces, all rainfall runoff would be retained on site and allowed to percolate to the groundwater basin underlying the site. Therefore, for the GWR facilities, the potential construction impacts would be less than significant.</p>	<p>None required.</p>
<p><b>Impact 4.4-2:</b> Violate any water quality standards or otherwise degrade groundwater quality during construction.</p>	<p><b>LS</b></p> <p>The proposed slant wells would be constructed using a dual rotary drill rig that would not use drilling fluids. Instead, the dual rotary method uses air, the water already in the geologic materials, and when necessary, additional potable water to circulate the drill cuttings. If potable water were added, the quality of that water would be better than the underlying brackish water, and therefore, would not result in groundwater degradation. Considering the drilling method and the use of only air and water to assist in drilling, there is no potential for groundwater degradation and the impact would be less than significant.</p> <p>The ASR injection/extraction wells would be drilled without the use of drilling muds. However, when necessary and depending on the formation material encountered, certain commercially available additives could be combined with the drilling water to increase fluid viscosity and stabilize the walls of the boring to prevent reactive shale and clay from swelling and caving into the hole. Therefore, while the use of bentonite muds would be necessary during the drilling of the ASR injection/extraction wells, the potential for degradation to groundwater is low and the impact is less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p><u>CalAm Facilities:</u></p> <p>The seven slant wells would be constructed at depths that would extend through the Dune Sand Aquifer and the 180-Foot Equivalent Aquifer. The water quality concerns for the construction of the slant wells proposed under the project variant are similar to those for the proposed project. The drilling method and materials used in the well construction would also be similar. If potable water were added, the quality of that water would be better than the underlying brackish water, and therefore, would not result in groundwater degradation. Considering the drilling method and the use of only air and water to assist in drilling, impacts related to groundwater degradation would be less than significant.</p> <p>The water quality impacts associated with construction of the ASR injection/extraction wells under the project variant would be the same as those identified for proposed project. Under the construction protocols for the project variant, commercially available additives could be combined with the drilling water to increase fluid viscosity and stabilize the walls of the boring to prevent reactive shale and clay from swelling and caving into the hole. Other products would be used to enhance the drilling performance and help reduce the build-up of solids, decrease friction, and aid</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.4 Groundwater Resources (cont.)</b>				
<b>Impact 4.4-2 (cont.)</b>			<p>in reducing solids suspension. Therefore, while the use of bentonite muds would be necessary during the drilling of the ASR injection/extraction wells, the potential for degradation to groundwater is low and the impact would be less than significant.</p> <p>The CalAm pipelines and aboveground facilities would be similar to the proposed project, they would require only shallow excavations and would not require construction activities that would intercept groundwater bearing zones and thus, would have a low potential of degrading groundwater quality. While pipeline trenches may encounter shallow groundwater, the construction operation of laying a pipeline and backfilling would not release contaminants into the shallow groundwater zone. This impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>Although discharges of pollutants to groundwater during well drilling activities for the GWR facilities has the potential to occur, impacts to groundwater quality during the construction of the Injection Well Facilities would be less than significant based on the GWR facilities' compliance with regulatory requirements that require best management practices, including preventative and emergency measures for potential spills. For all other components, there would be a less-than-significant impact based on the compliance with regulatory requirements that ensure that there would be a lack of substantial pollutants released or disposed at the sites, and the low amount of flow that would carry any pollutants such that no contamination of groundwater resources would occur. Therefore the potential construction impacts would be less than significant.</p>	
<b>Impact 4.4-3:</b> Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during operations so as to expose well screens and pumps.	<p><b>LS</b></p> <p>The impact analysis of the Seawater Intake System was based primarily on the North Marina Groundwater Model (NMGWM) model simulations and the response of monitoring wells to the 5-day constant-discharge pumping test (March 2015). None of the wells located in the area of influence would be adversely impacted by the drawdown caused by project pumping and the impact of the project on neighboring, local groundwater wells is less than significant. Since the proposed project would return what small percentage of groundwater that is extracted from the SVGB pumping at the slant wells would not deplete groundwater resources in the SVGB and the impact would be less than significant.</p> <p>Management of the ASR injection and extraction would ensure that operation of the proposed ASR injection/extraction wells would remain constant and therefore would not cause groundwater mounding, change groundwater gradients, or lower groundwater levels. Impacts associated with ASR Operation are considered less than significant.</p> <p>Operation of the monitoring wells, the MPWSP Desalination Plant, the Terminal Reservoir, the pipelines, or the pump stations would not interfere with, extract from, or inject into the groundwater aquifers in the SVGB or SGB. Consequently, there would be no impact associated with these facilities.</p> <p>Recognizing the long term nature of the proposed project and the need to provide continued verification that the project would not contribute to lower groundwater levels in neighboring wells or to seawater intrusion within the SVGB, the project applicant has proposed as part of the project to expand the existing regional groundwater monitoring program to include the area where groundwater elevations are anticipated to decrease by one or more feet in the Dune Sand Aquifer and the 180-Foot Equivalent Aquifer (see <b>Figures 4.4-12 and 4.4-13</b>). Implementation of <b>Applicant Proposed Mitigation Measure 4.4-3 (Groundwater Monitoring and Avoidance of Well Damage)</b> would ensure that a groundwater monitoring program is in place before and during groundwater pumping operations in the affected area to verify that the seawater intake system performs as expected. The monitoring program proposed under <b>Applicant Proposed Mitigation Measure 4.4-3</b> would detect changes to local groundwater elevations and quality, and evaluate whether those changes could damage neighboring active wells. Implementation of</p>	<b>Applicant Proposed MM 4.4-3: Groundwater Monitoring and Avoidance of Well Damage.</b>	<p><b>LS</b></p> <p>The NMGWM was used to simulate aquifer response (as groundwater level change) of the MPWSP Variant in the Dune Sands Aquifer and the deeper 180-Foot Equivalent Aquifer. The model simulations of the project variant scenarios (5n, 5ncb, and 5nc) show that the combined effect of groundwater extraction at the proposed slant wells and the increased supply of treated water from the Regional Wastewater Plant would have a reduced area of pumping influence, and therefore a smaller cone of depression, when compared to the response of the proposed project. This dampened response in the Dune Sands Aquifer and the 180-Equivalent aquifer occurs because under the project variant, less water is extracted from the slant wells, and more water is provided to CSIP from the Regional Wastewater Treatment Plant for use by agricultural users.</p> <p>The impact of the project variant on the groundwater supply in the SVGB is less than significant because only a small fraction of groundwater, smaller than that extracted by the proposed project, would be drawn to the slant wells. The inland groundwater drawn to the slant wells under the project variant would be from an area previously impacted by seawater intrusion and that fraction of water would ultimately be returned to the basin as Salinas Valley return flows.</p> <p>The NMGWM estimates that the average annual decrease of surface water loss to the underlying aquifer, as a result of the project variant, would be about 65 afy (Geoscience, 2015). Implementation of the MPWSP Variant would improve overall groundwater conditions of the SVGB by reducing extractions of groundwater in the CSIP area. In addition to the well pumping reduction benefits, treating and delivering a portion of surface stream diversions as recycled water to growers in the CSIP area would add to the surface application of water over a large area of the study area (i.e., the Crop Irrigation component of the Proposed Project). Thus, any reduction in recharge due to source water diversions from surface water bodies (Reclamation Ditch, Tembladero Slough and Blanco Drain) to the aquifers underlying the water bodies would only slightly reduce the benefit to groundwater in the Salinas Valley Groundwater Basin.</p> <p>Because the GWR component of the project variant would provide additional water for downgradient groundwater extraction, it would result in both higher and lower water levels in existing basin wells over time depending on the timing of extraction and the buildup of storage in the basin. HydroMetrics examined potential changes in water levels for eight key production wells for a 33-year simulation period (including 25 years of project variant operations). The results of the</p>	None required.



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.4 Groundwater Resources (cont.)</b>				
Impact 4.4-3 (cont.)	Applicant Proposed Mitigation Measure 4.4-3 is not necessary to address any significant project effect, but instead further bolsters the conclusion that the impact of the proposed project on nearby active wells would be less than significant.		groundwater modeling by HydroMetrics were that simulated water levels sometimes would be lower under the project variant scenario because of increased pumping at existing extraction wells. However, simulated water levels would be lowered only about ten feet or less and would be lowered for a relatively short duration, typically for a few months. In addition, simulated water levels would be generally higher than pre-project levels. See Section 6.3.2 for more detailed discussion.	
Impact 4.4-4: Violate any water quality standards or otherwise degrade groundwater quality during operations.	<p><b>LSM</b></p> <p>The pumping of the slant wells would migrate the seawater/freshwater interface back toward the ocean, which would be considered a less than significant impact. For the slant wells, the potential impact of interference with existing remediation systems would be less than significant with the possible exception of the OU1 TCE A-Aquifer Plume and two of the OUCTP plumes at the former Fort Ord. The impact would be reduced to less than significant with the implementation of Applicant Proposed Mitigation Measure 4.4-3 and Mitigation Measure 4.4-4. For the ASR injection/extraction wells, the net addition of water would be considered a less than significant impact. For the ASR injection/extraction wells, the potential impact of interference with existing remediation systems would be less than significant. The operation of all other project facilities would have no impact to groundwater quality.</p> <p>Therefore, for the proposed project as a whole, the potential operations impacts would be less than significant with mitigation</p>	<b>MM 4.4-4: Groundwater Monitoring and Avoidance of Impacts to Groundwater Remediation Plumes</b>	<p><b>LS</b></p> <p>Similar to the proposed project, pumping at the slant wells would reduce the inland migration rate of the seawater/freshwater interface. The injection of Salinas Valley return flows, and increased deliveries to CSIP would facilitate the reduction of seawater intrusion and the impact would, therefore, be considered less than significant. The cone of depression and the resultant area of influence of the MPWSP Variant slant wells were considerably less extensive than those of the MPWSP. Because of this, the pumping influence from the slant well pumping under the project variant would not intersect the plumes and this impact is less than significant. See Section 6.3.2 for more detailed discussion.</p>	None required.
<b>4.5 Marine Biological Resources</b>				
Impact 4.5-1: Result in substantial adverse effects on candidate, sensitive, or special-status marine species during construction.	<p><b>LS</b></p> <p>The drilling of the subsurface slant wells for the Seawater Intake System is the only construction activity proposed within the boundaries of the Marine Resources Study Area. The drill rig insertion point would be located onshore above the maximum high-tide elevation and would extend offshore into the surf zone roughly 200 to 220 feet below msl (190 to 210 feet below the seafloor). Since all surface disturbance associated with slant well construction activities would occur on the back (inland) side of the dunes, it is unlikely that any beach sands displaced by these activities would be suspended into nearshore waters and adversely affect water quality. However, the directional drilling of the 30-inch-diameter slant wells can be expected to generate some subterranean noise that would transmit into seafloor sediments.</p> <p>Even under the worst-case scenario, based on the scientific literature, the subterranean noise level generated during slant well drilling would not result in acute physical damage or mortality to fish. Any noise from the slant well drilling equipment that might reach the seafloor surface would be at or below the ambient noise levels set by the surf over the slant well terminus locations. Consequently, any of the drilling noise reaching overlying ocean waters is expected to be below background noise levels and have no effect on special-status species. Based on the expected subsurface noise levels generated by the slant well drilling at the seafloor surface, potential background noise levels, and the noise levels required to cause acute or chronic harm to either special status fish species or marine mammals, the potential for impacts to candidate, sensitive or special-status species due to undersea noise caused during construction of the subsurface slant wells would be less than significant and no mitigation is required.</p>	None required.	<p><b>LS</b></p> <p><u>CalAm Facilities:</u></p> <p>The impact associated with construction of the MPWSP Variant would be reduced when compared to the proposed project because fewer slant wells (seven slant wells versus ten slant wells under the proposed project) would be constructed. However, the significance determination would be the same (less than significant).</p> <p><u>GWR Facilities:</u></p> <p>Not applicable. None of the GWR facilities would involve construction within the nearshore waters (within 5 miles of shore) of Monterey Bay.</p>	None required.
Impact 4.5-2: Result in substantial interference with the movement of any native resident or migratory fish or wildlife species during construction.	<p><b>NI</b></p> <p>The terminus points for the slant wells are located approximately 200 to 220 feet below msl and would not directly impede the movement of marine species. Moreover, any noise transmitted into the water from the slant well drilling equipment is estimated to be below ambient background levels in the surf zone and, therefore, would not be detectable. Therefore, no impact to the movement of any native resident or migratory fish or wildlife species would result.</p>	None required.	<p><b>NI</b></p> <p><u>CalAm Facilities:</u></p> <p>The construction impact of the MPWSP Variant would be the same as that of the proposed project. No impact to the movement of migration of marine species would result.</p>	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.5 Marine Biological Resources (cont.)</b>				
Impact 4.5-2 (cont.)			<p><u>GWR Facilities:</u> Not applicable. None of the GWR facilities would involve construction within the nearshore waters (within 5 miles of shore) of Monterey Bay.</p>	
<p><b>Impact 4.5-3:</b> Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.</p>	<p><b>LSM</b> Operation of the MPWSP Desalination Plant would involve pumping up to 24.1 mgd of water from subsurface slant wells that terminate 200 to 220 feet below msl under the surf zone. The analysis of potential adverse effects on special-status species during project operations considered the potential for impingement of marine organisms from operation of the subsurface slant wells. Based on comparison of the vertical infiltration rate associated with the slant wells and published swimming speeds for plankton, larval invertebrates and larval fish, it is highly unlikely that these small organisms would be impinged against the seafloor by vertical infiltration of seawater pumped into the MPWSP Desalination Plant.</p> <p>The possibility that fine organic matter could be impinged against the seafloor causing a build up of organic matter and change the normal distribution of sediment grain size was also considered; it was determined that fine-grained material would not settle to the seafloor over the subsurface slant wells.</p> <p>The proposed discharges brine via the MRWPCA ocean outfall would result in increases in ambient salinity levels in the Marine Resources Study Area of less than 2 ppt.</p> <p>Studies have not indicated adverse effects on survival, growth, or behavior at these levels. Since the proposed discharges of brine from the MPWSP Desalination Plant would be below these thresholds, the impact would be less than significant.</p> <p>The analysis also considered adverse effects to marine resources associated with other contaminants in the brine discharge. It was assumed that the entire mass of contaminants in ocean water delivered to the MPWSP Desalination Plant through the subsurface slant wells would be present, and therefore concentrated, in the brine discharge. Concentrations of PCBs and ammonia in the brine discharges could occasionally exceed Ocean Plan objectives, which have been set with appropriate safety margins to ensure they do not accumulate to unhealthy concentrations in biota that may be eaten by humans. Although the PCB and ammonia concentrations in the brine discharge would not be acutely toxic, the potential exceedance of the Ocean Plan objective is considered a significant impact. However, with implementation of the prescribed mitigation measure, which would be incorporated into the Amended MRWPCA NPDES Permit, the impact would be reduced to a less-than-significant level.</p> <p>Concern has been expressed that the jet velocities associated with desalination brine discharges could cause damage to marine organisms caused by experimentally induced shear stress. Studies that indicate that at the maximum discharge velocity modeled for the brine discharges from the MPWSP Desalination Plant, the shear stress caused by the diffusers would be relatively small and transit times through this region relatively short. The impact to special-status species would be less than significant.</p>	<p><b>MM 4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.</b> <i>[See Impact 4.3-4 in Section 4.3, Surface Water Hydrology and Water Quality, for a discussion of the potential secondary impacts of this mitigation measure.]</i></p>	<p><b>LSM</b> Because of its reduced number of wells and rate of intake compared to the proposed project, the MPWSP Variant would result in a peak vertical infiltration rate equal to or less than that of the proposed project, and so similarly would have a less-than-significant impact with respect to impingement of marine organisms.</p> <p>Under the MPWSP Variant, the greatest increases over ambient salinity would occur as a result of brine-only discharges, and these increases would be less than 2 ppt (1.6 and 1.7 ppt). Therefore, the MPWSP Variant would have a less-than-significant impact on special-status species as a result of elevated salinity.</p> <p>Brine-only and some brine-with-wastewater and combined discharges would result in a potential exceedance in PCBs over the Ocean Plan water quality objectives. Brine-with-wastewater, blended discharge ammonia would be present in MPWSP Variant discharge, and combined discharges would result in exceedances for ammonia. Although chlordane, DDT, TCDD, and toxaphene in MPWSP Variant discharges would not approach the concentrations or exposure durations shown to be acutely toxic, potential exceedance of their respective Ocean Plan objectives could lead to significant impacts on marine resources, which would be minimized to less-than-significant levels through implementation of <b>Mitigation Measure 4.3-4</b>. No additional mitigation would be required as a result of the different operation under the MPWSP Variant.</p> <p>Potential shear stress-related impacts would be the same as those described for the proposed project (less than significant).</p> <p>See Section 6.3.3 for more detailed discussion.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)**  
**COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.5 Marine Biological Resources (cont.)</b>				
<p><b>Impact 4.5-4:</b> Result in substantial interference with the movement of any native resident or migratory fish or wildlife species during project operations.</p>	<p><b>LSM</b></p> <p>As discussed under Impact 4.5-3, impingement of organisms or fine organic matter against the seafloor due to operation of the subsurface slant wells is highly unlikely. Therefore, operation of the subsurface slant wells would not interfere with the movement of any native resident or migratory fish or wildlife species.</p> <p>Because the recommended salinity thresholds consider salinity effects on survival, growth, and behavior, and the discharge of brine from the MPWSP Desalination Plant would be below the thresholds, any secondary effects on migration and movement would be less than significant.</p> <p>Although under no discharge scenario would the proposed project degrade the existing water quality of Monterey Bay as measured by PCB or ammonia concentration, this analysis considers occasional exceedances of the Ocean Plan water quality objectives for PCBs and ammonia a potentially significant impact. However, the impact would be reduced to a less-than-significant level with implementation of the mitigation.</p>	<p><b>MM 4.3-4: Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID.</b></p> <p><i>[See Impact 4.3-4 in Section 4.3, Surface Water Hydrology and Water Quality, for a discussion of the potential secondary impacts of this mitigation measure.]</i></p>	<p><b>LSM</b></p> <p>Same as the proposed project, as discussed under Impact 4.5-3, impingement of organisms or fine organic matter against the seafloor due to operation of the subsurface slant wells is highly unlikely. Therefore, operation of the subsurface slant wells would not interfere with the movement of any native resident or migratory fish or wildlife species. Because the recommended salinity thresholds consider salinity effects on survival, growth, and behavior, and the discharge of brine from the MPWSP Variant Desalination Plant would be below the thresholds, any secondary effects on migration and movement would be less than significant. As discussed under Impact 4.5-3, potential exceedances of Ocean Plan water quality objectives for any constituent in project variant discharges would be reduced to less than significant with implementation of <b>Mitigation Measure 4.3-4</b>.</p> <p>See Section 6.3.3 for more detailed discussion.</p>	None required.
<p><b>Impact 4.5-5:</b> Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.</p>	<p><b>LS</b></p> <p>The only construction activities that could have any effect on an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan within the Marine Resources Study Area is the drilling of the subsurface slant wells. As discussed under Impact 4.5-1, no adverse effects are anticipated.</p> <p>Because the increase in ambient salinities at the edge of the ZID from the proposed brine discharges would be less than 2 ppt, the impact related to conflicts with adopted conservation plans would be less than significant.</p>	None required.	<p><b>LS</b></p> <p><u>CalAm Facilities:</u></p> <p>The construction and operational impact of the MPWSP Variant would be the same as or reduced compared to those of the proposed project with respect to subsurface slant wells and salinity concentrations. No impact to the movement of migration of marine species would result.</p> <p>Therefore, conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional or state habitat conservation plan, including the California Coastal Act, essential fish habitat and the small area of kelp in the southern part of the study area, would be less than significant and no mitigation is required.</p> <p><u>GWR Facilities:</u></p> <p>There are no adopted Habitat Conservation Plans or Natural Conservation Community Plans within the area of the GWR facilities that address marine biological resources.</p>	None required.
<b>4.6 Terrestrial Biological Resources</b>				
<p><b>Impact 4.6-1:</b> Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly or through habitat modification, during construction.</p>	<p><b>LSM</b></p> <p>Construction activities could result in direct impacts to special-status plants through mortality of individuals during earthwork and loss of habitat. Indirect impacts to plants can result from population fragmentation, introduction of non-native weeds, and interference with plant metabolic processes from construction effects such as fugitive dust and sedimentation. Construction activities can result in direct impacts on wildlife by direct trampling or entrapment of individuals and habitat removal. Indirect impacts to wildlife can occur from harassment, behavior disruption, increased predation, and degradation of habitat. Significant impacts to special-status plant and animal species could occur during construction at all of the proposed MPWSP facility sites; however, all impacts could be reduced to a less-than-significant level with implementation of mitigation. (Refer to Table 4.6-4 in Section 4.6, Terrestrial Biological Resources, for the specific plant and wildlife species that could be adversely affected by construction at each proposed facility site.)</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p><b>MM 4.6-1d: Protective Measures for Western Snowy Plover.</b></p> <p><b>MM 4.6-1e: Avoidance and Minimization Measures for Special-status Plants.</b></p> <p><b>MM 4.6-1f: Avoidance and Minimization Measures for Smith’s Blue Butterfly.</b></p> <p><b>MM 4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.</b></p>	<p><b>LSM</b></p> <p>Construction-related impacts of the MPWSP Variant would be similar to those of the proposed project, with the exception of some additional species potentially affected as a result of the construction of GWR facilities within different habitat types (listed under “GWR facilities”). All impacts would be reduced to less than significant with implementation of mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>With the exception of the subsurface slant wells, the CalAm facilities under the MPWSP Variant would result in the same impacts to special-status plants and wildlife species as the proposed project. At the subsurface slant well site, due to the fewer slant wells that would be constructed (seven wells vs. ten wells under the proposed project), the total disturbance area would be reduced and there would be a corresponding reduction in impacts to special-status plant species, Smith’s blue butterfly, western snowy plover, black legless lizard, silvery legless lizard, and coast horned lizard. Because the footprint of the MPWSP Desalination Plant would be the same under the MPWSP Variant as under the proposed project, there would be no change in impacts at the desalination plant site.</p> <p><u>GWR Facilities:</u></p> <p>Construction of GWR facilities may adversely affect, either directly or through habitat modification, special-status plant and wildlife species and their habitat. Significant impacts to special-status plant and animal species could occur during construction at all of the proposed GWR facility sites,</p>	<p><b>Mitigation Measure BT-1a: Implement Construction Best Management Practices.</b></p> <p><b>Mitigation Measure BT-1b: Implement Construction-Phase Monitoring.</b></p> <p><b>Mitigation Measure BT-1c: Implement Non-Native, Invasive Species Controls.</b></p> <p><b>Mitigation Measure BT-1d: Conduct Pre-Construction Surveys for California Legless Lizard.</b></p> <p><b>Mitigation Measure BT-1e: Prepare and Implement Rare Plant Restoration Plan to Mitigate Impacts to Sandmat Manzanita, Monterey Ceanothus, Monterey Spineflower, Eastwood’s</b></p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.6 Terrestrial Biological Resources (cont.)</b>				
Impact 4.6-1 (cont.)		<p><b>MM 4.6-1h: Avoidance and Minimization Measures for Western Burrowing Owl.</b></p> <p><b>MM 4.6-1i: Avoidance and Minimization Measures for Nesting Birds.</b></p> <p><b>MM 4.6-1j: Avoidance and Minimization Measures for American Badger.</b></p> <p><b>MM 4.6-1k: Avoidance and Minimization Measures for Monterey Dusky-Footed Woodrat.</b></p> <p><b>MM 4.6-1l: Avoidance and Minimization Measures for Pallid Bat.</b></p> <p><b>MM 4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine.</b></p> <p><b>MM 4.6-1n: Habitat Mitigation and Monitoring Plan.</b></p> <p><b>MM 4.6-1o: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander.</b></p> <p><b>MM 4.12-1b: General Noise Controls for Construction Equipment.</b></p> <p><b>MM 4.14-2: Site-Specific Construction Lighting Measures.</b></p>	<p>including impacts to: sandmat manzanita, Monterey ceanothus, Monterey spineflower, Eastwood's goldenbush, and Kellogg's horkelia; roosting special-status bat species and nesting raptors, migratory birds, tricolored blackbird, western burrowing owl, California horned lark, white-tailed kite, or other protected avian species; Smith's blue butterfly; California red-legged frog; western pond turtle; Coast Range newt; two-striped garter snake; California legless lizard; coast horned lizard; Monterey dusky-footed woodrat; Salinas harvest mouse; Monterey ornate shrew; and American badger. All impacts could be reduced to a less-than-significant level with implementation of mitigation.</p>	<p><b>Goldenbush, Coast Wallflower, and Kellogg's Horkelia.</b></p> <p><b>Mitigation Measure BT-1f: Conduct Pre-Construction Protocol-Level Botanical Surveys within the Product Water Conveyance: Coastal Alignment Option between Del Monte Boulevard and the Regional Treatment Plant site on Armstrong Ranch; and the remaining portion of the Project Study Area within the Injection Well Facilities site.</b></p> <p><b>Mitigation Measure BT-1g: Conduct Pre-Construction Surveys for Special-Status Bats.</b></p> <p><b>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.</b></p> <p><b>Mitigation Measure BT-1j: Conduct Pre-Construction Surveys for American Badger.</b></p> <p><b>Mitigation Measure BT-1k: Conduct Pre-Construction Surveys for Protected Avian Species, including, but not limited to, white-tailed kite and California horned lark.</b></p> <p><b>Mitigation Measure BT-1l: Conduct Pre-Construction Surveys for Burrowing Owl.</b></p> <p><b>Mitigation Measure BT-1m: Minimize effects of nighttime construction lighting.</b></p> <p><b>Mitigation Measure BT-1n: Mitigate Impacts to Smith's blue butterfly.</b></p> <p><b>Mitigation Measure BT-1p: Avoid and Minimize Impacts to Western Pond Turtle.</b></p> <p><b>Mitigation Measure BT-1q: Avoid and Minimize Impacts to California Red-Legged Frog.</b></p>



**TABLE ES-4 (Continued)  
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<b>4.6 Terrestrial Biological Resources (cont.)</b>				
<p><b>Impact 4.6-2:</b> Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.</p>	<p><b>LSM</b> Project construction could result in significant impacts to sensitive natural communities (including riparian habitat) and critical habitat. Construction of the subsurface slant wells and Source Water Pipeline would result in significant impacts to critical habitat for western snowy plover, and construction of the Transmission Main would result in significant impacts to critical habitat for Monterey Spineflower. None of the other project facilities would result in significant impacts to critical habitat. The subsurface slant wells, Source Water Pipeline, and Transmission Main would also result in significant impacts to central dune scrub; the Desalinated Water Pipeline would result in significant impacts to central dune scrub and riparian woodland and scrub; the Transfer Pipeline would result in significant impacts to central maritime chaparral; the Monterey Pipeline would significantly impact central dune scrub, coast live oak woodland, and riparian woodland and scrub; the ASR-5 and ASR-6 Wells, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, and ASR Settling Basin would result in significant impacts to oak woodland, coast sage scrub, and central maritime chaparral; and the ASR Pump Station and Terminal Reservoir would significantly impact central maritime chaparral. All impacts to sensitive natural communities and critical habitat would be reduced to a less-than-significant level with implementation of the prescribed mitigation measures.</p> <p>No impacts to sensitive natural communities or critical habitat would result from construction of the MPWSP Desalination Plant, Salinas Valley Return Pipeline, Brine Discharge Pipeline, Valley Greens Pump Station, Ryan Ranch–Bishop Interconnection Improvements, or Main System–Hidden Hills Interconnection Improvements.</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p><b>MM 4.6-1d: Protective Measures for Western Snowy Plover.</b></p> <p><b>MM 4.6-1e: Avoidance and Minimization Measures for Special-status Plants.</b></p> <p><b>MM 4.6-1n: Habitat Mitigation and Monitoring Plan.</b></p> <p><b>MM 4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.</b></p> <p><b>MM 4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities.</b></p>	<p><b>LSM</b> The MPWSP Variant would result in similar types of impacts to those of the proposed project. All impacts would be reduced to less than significant with implementation of mitigation.</p> <p><u>CalAm Facilities:</u> With the exception of the subsurface slant well site, the CalAm facilities under the MPWSP Variant would result in the same impacts to sensitive natural communities and critical habitat as the proposed project. At the subsurface slant well site, due to the fewer slant wells that would be constructed (seven wells vs. ten wells under the proposed project), the total disturbance area would be reduced, which would result in a corresponding reduction in impacts to central dune scrub and critical habitat for western snowy plover. However, the overall significance determination would not change.</p> <p><u>GWR Facilities:</u> Construction of GWR facilities may adversely affect sensitive habitats including riparian, wetlands, and/or other sensitive natural communities. Construction of the Salinas Pump Station, Salinas Treatment Facility, Lake El Estero Diversion, Treatment Facilities at Regional Treatment Plant would not result in impacts to sensitive habitat. Construction of the Blanco Drain Diversion and Coastal Alignment Option would affect riparian habitat. Construction of the RUWAP Alignment Option and Injection Well Facilities would affect central maritime chaparral. All impacts could be reduced to a less-than-significant level with implementation of mitigation.</p>	<p><b>Mitigation Measure BT-2a: Avoidance and Minimization of Impacts to Riparian Habitat and Wetland Habitats.</b></p> <p><b>Mitigation Measure BT-2c: Avoidance and Minimization of Construction Impacts Resulting from Horizontal Directional Drilling under the Salinas River.</b></p>
<p><b>Impact 4.6-3:</b> Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the State during construction.</p>	<p><b>LSM</b> Direct impacts to wetlands include removal of vegetation, soil, or structures and/or the placement of fill in the wetland, or hydrological modifications (i.e. altering the flow of water in or out of the wetland or water). Indirect impacts could occur from construction activities or construction worker foot traffic that inadvertently extend beyond the designated construction work area and into waters or wetland features, trash and debris left in the features following construction, sedimentation of the feature as a result of increased soil erosion from construction work areas, and degradation of water quality from pollutants (e.g., oil, hydraulic fluid) that are conveyed by surface runoff from the construction site to offsite waters. With respect to sedimentation and degradation of water quality from construction pollutants, for all proposed project components, implementation of the BMPs in the project-specific SWPPP would require measures to manage soil erosion and protect water quality in receiving waterbodies.</p> <p>Construction of the Desalinated Water Pipeline, Monterey Pipeline, Terminal Reservoir/ASR Pump Station, Ryan Ranch–Bishop Interconnection Improvements, Main System–Hidden Hills Interconnection Improvements, and ASR-5 and ASR-6 Wells would result in direct impacts to potential waters of the U.S. and/or waters of the State. Construction of the subsurface slant wells, Source Water Pipeline, Salinas Valley Return Pipeline, and Brine Discharge Pipeline could result in significant indirect impacts to wetlands/waters if construction activities or construction worker foot traffic were to extend beyond the designated construction work area. All significant direct and indirect impacts would be reduced to a less-than-significant level with implementation of the prescribed mitigation measures.</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p><b>MM 4.6-3: Avoid, Minimize, and or Mitigate Impacts to Wetlands.</b></p>	<p><b>LSM</b> The MPWSP Variant would result in similar types of impacts to those of the proposed project. All impacts would be reduced to less than significant with implementation of mitigation.</p> <p><u>CalAm Facilities:</u> With the exception of the subsurface slant well site, the CalAm facilities under the MPWSP Variant would result in the same impacts to potential waters of the U.S. and of the State as the proposed project. Due to the decreased disturbance area at the subsurface slant well site, potential impacts to the adjacent CEMEX settling ponds would also be reduced. However, the overall significance determination would not change.</p> <p><u>GWR Facilities:</u> Construction of the Reclamation Ditch Diversion, Tembladero Slough Diversion, Blanco Drain Diversion would impact Other waters of the U.S. All impacts could be reduced to a less-than-significant level with implementation of mitigation.</p>	<p><b>Mitigation Measure BT-1a: Implement Construction Best Management Practices.</b></p> <p><b>Mitigation Measure BT-2a: Avoidance and Minimization of Impacts to Riparian Habitat and Wetland Habitats.</b></p> <p><b>Mitigation Measure BT-2c: Avoidance and Minimization of Construction Impacts Resulting from Horizontal Directional Drilling under the Salinas River.</b></p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.6 Terrestrial Biological Resources (cont.)</b>				
<b>Impact 4.6-3</b> (cont.)	The impact associated with construction of the MPWSP Desalination Plant, Transfer Pipeline, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR Settling Basin, and Valley Greens Pump Station would be less than significant.			
<b>Impact 4.6-4:</b> Conflict with local tree ordinances.	<p><b>LSM</b></p> <p>With the exception of the subsurface slant wells and Valley Greens Pump Station (site option 2), all other proposed project facilities have the potential to conflict with a local tree ordinance, either by requiring removal or resulting in injury to a protected tree.</p>	<p><b>MM 4.6-4: Compliance with Local Tree Ordinances.</b></p>	<p><b>LSM</b></p> <p>The MPWSP Variant could conflict with local tree ordinances, and would have a less-than-significant impact after implementation of mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm facilities under the MPWSP Variant to conflict with local tree ordinances would be identical to the proposed project.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities may result in tree trimming and/or removal, although the exact number of trees will not be known until final engineering is completed. Prior to construction, the GWR facilities would be required to comply with the tree trimming/removal ordinances outlined in the relevant city and county codes (including City of Seaside Municipal Code Chapter 8.54 and City of Marina Municipal Code Chapter 12.04). Therefore, the impacts associated with potential conflict with tree removal and other biological resources policies and ordinances would be less than significant.</p>	None required.
<b>Impact 4.6-5:</b> Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.	<p><b>LSM</b></p> <p>Routine maintenance of the subsurface slant wells would be conducted every 5 years and would require excavation of the slant well vaults in order to access the wellheads. Mechanical brushes would be lowered into the wells to clean the well screens. Because the estimated disturbance area associated with this routine maintenance is similar to the disturbance area associated with slant well construction (roughly 10 acres), routine maintenance of the slant wells could result in significant impacts to special-status plant and wildlife species that are similar to the impacts of slant well construction. However, with implementation of the same mitigation measures prescribed for construction, these impacts would be reduced to a less-than-significant level.</p> <p>The 3-million-gallon brine storage basin at the MPWSP Desalination Plant could attract waterfowl. Migratory waterfowl could become sick or die from use of the brine storage basin, a significant impact. However, with implementation of mitigation, the impact would be reduced to a less-than-significant level.</p> <p>Safety lighting at the ASR Pump Station/Terminal Reservoir site could adversely affect migratory birds or bats by causing them to abandon their nests or roosts. However, this significant impact would be reduced to a less-than-significant level with mitigation.</p> <p>Maintenance and operations of all other proposed facilities would not result in substantial noise increases, new permanent sources of glare or light, or foreseeable surface disturbance in undeveloped areas. Therefore, no impact to special-status species would result from implementation of all other facilities.</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p><b>MM 4.6-1d: Protective Measures for Western Snowy Plover.</b></p> <p><b>MM 4.6-1e: Avoidance and Minimization Measures for Special-status Plants.</b></p> <p><b>MM 4.6-1f: Avoidance and Minimization Measures for Smith’s Blue Butterfly.</b></p> <p><b>MM 4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.</b></p> <p><b>MM 4.6-1i: Avoidance and Minimization Measures for Nesting Birds.</b></p> <p><b>MM 4.6-1n: Habitat Mitigation and Monitoring Plan.</b></p> <p><b>MM 4.12-1b: General Noise Controls for Construction Equipment.</b></p> <p><b>MM 4.14-2: Site-Specific Construction Lighting Measures.</b></p> <p><b>MM 4.6-5: Installation and Monitoring of Bird Deterrents at the Brine Storage Basin.</b></p>	<p><b>LSM</b></p> <p>With the exception of impacts to western snowy plover, which would be reduced under the MPWSP Variant compared to the proposed project, the MPWSP Variant’s impacts would be similar to those of the proposed project with respect to candidate, sensitive, and special-status species. All impacts on such species would be reduced to less than significant through the implementation of mitigation measures (applicable to the CalAm facilities).</p> <p><u>CalAm Facilities:</u></p> <p>With the exception of the subsurface slant well site, the CalAm facilities under the MPWSP Variant would result in the same impacts to candidate, sensitive, or special-status species during project operations as the proposed project. Due to the decreased disturbance area at the subsurface slant well site, potential impacts to species would also be reduced. However, the overall significance determination would not change.</p> <p><u>GWR Facilities:</u></p> <p>General operations and maintenance activities associated with GWR pipelines would include annual inspections, testing and servicing of valves, vegetation maintenance along rights-of-way, and repairs of minor leaks in buried pipeline joints or segments. In addition, it is anticipated that each of the injection wells would be back-flushed for about 4 hours weekly, requiring discharge of the back-flush water to a percolation pond or back-flush basin. These discharges of groundwater would be intermittent, and would temporarily inundate a small area prior to percolating to the groundwater basin. In addition, the area would be disked occasionally to maintain the percolation characteristics of the basin. General operations and maintenance activities associated with other GWR facilities (e.g., Salinas Pump Station, Salinas Treatment Facility, Lake El Estero, the Reclamation Ditch Diversion site, Tembladero Ditch Diversion site, Blanco Drain Diversion site, and Product Water Conveyance Booster Pump Station) would include staff oversight, monitoring and inspections, repairs, and servicing. These activities would not significantly impact any special-status species, if present, as the disturbance would be minimal and intermittent. Therefore, operations and maintenance impacts would be less than significant.</p>	None required.

**TABLE ES-4 (Continued)**  
**COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.6 Terrestrial Biological Resources (cont.)</b>				
<p><b>Impact 4.6-6:</b> Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during project operations.</p>	<p><b>LSM</b></p> <p>Routine maintenance of the subsurface slant wells would require approximately 10 acres of surface disturbance and, like construction of the subsurface slant wells, would result in significant impacts to sensitive natural communities and critical habitat for western snowy plover. However, with implementation of the same mitigation measures prescribed for construction, these impacts would be reduced to a less-than-significant level.</p> <p>Maintenance and operations of all other proposed facilities would not result in foreseeable surface disturbance in undeveloped areas. Therefore, no impact to sensitive natural communities or critical habitat from operations and maintenance would result. No mitigation is required.</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p><b>MM 4.6-1d: Protective Measures for Western Snowy Plover.</b></p> <p><b>MM 4.6-1n: Habitat Mitigation and Monitoring Plan.</b></p> <p><b>MM 4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.</b></p> <p><b>MM 4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities.</b></p>	<p><b>LSM</b></p> <p>The MPWSP Variant would result in similar types of impacts to those of the proposed project during operations, though with some reduction in impacts on central dune scrub and critical habitat for western snowy plover, and additional impacts on riparian habitats associated with the Salinas River. Overall, impacts would be less than significant after implementation of mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>With the exception of the subsurface slant well site, the CalAm facilities under the MPWSP Variant would result in the same impacts to sensitive natural communities and critical habitat as the proposed project. At the subsurface slant well site, due to the fewer slant wells (seven wells vs. ten wells under the proposed project), the total disturbance area associated with routine maintenance of the slant wells would be reduced, which would result in a corresponding reduction in impacts to central dune scrub and critical habitat for western snowy plover. However, the overall significance determination would not change.</p> <p><u>GWR Facilities:</u></p> <p>The combined operation of the Salinas Pump Station Diversion, Salinas Treatment Facility, and the Blanco Drain Diversion components of the Proposed Project would affect the hydrology of the Salinas River with a potential reduction of up to 2 percent of the average annual flow (up to 1 percent of the average annual flow with the operation of the Salinas Pump Station Diversion and the Salinas Treatment Facility, combined with up to 1 percent of the average annual flow with the operation of the Blanco Drain Diversion). The reduction of up to 2 percent of the average annual flow in the Salinas River by the coexistent operation of the Salinas Pump Station Diversion, Salinas Treatment Facility, and the Blanco Drain Diversion components of the Proposed Project is not substantial in relation to total flows. Thus, this diversion would result in a less-than-significant impact on Salinas River flows, and, therefore, a less-than-significant impact on the riparian habitats associated with the river.</p>	<p>None required.</p>
<p><b>Impact 4.6-7:</b> Result in substantial adverse effects on federal wetlands, federal other waters, and waters of the State during project operations.</p>	<p><b>LSM</b></p> <p>Periodic maintenance of the subsurface slant wells could adversely affect the CEMEX settling ponds, a significant impact. However, with implementation of some of the same mitigation measures prescribed for construction, these impacts would be reduced to a less-than-significant level.</p> <p>No impact to waters of the U.S./waters of the State would result from maintenance and operation of all other CalAm facilities. No mitigation is required.</p>	<p><b>MM 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p><b>MM 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p><b>MM 4.6-1c: General Avoidance and Minimization Measures.</b></p>	<p><b>LSM</b></p> <p>The MPWSP Variant would result in similar types of impacts to those of the proposed project during operations. Overall, impacts would be less than significant after implementation of mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>With the exception of the subsurface slant well site, the CalAm facilities under the MPWSP Variant would result in the same impacts to potential waters of the U.S. and of the State during operations as the proposed project. Due to the decreased disturbance area at the subsurface slant well site, potential impacts to the adjacent CEMEX settling ponds would also be reduced. However, the overall significance determination would not change.</p> <p><u>GWR Facilities:</u></p> <p>The combined operation of the Salinas Pump Station Diversion, Salinas Treatment Facility, and the Blanco Drain Diversion components of the Proposed Project would affect the hydrology of the Salinas River with a potential reduction of up to 2 percent of the average annual flow (up to 1 percent of the average annual flow with the operation of the Salinas Pump Station Diversion and the Salinas Treatment Facility, combined with up to 1 percent of the average annual flow with the operation of the Blanco Drain Diversion). The reduction of up to 2 percent of the average annual flow in the Salinas River by the coexistent operation of the Salinas Pump Station Diversion, Salinas Treatment Facility, and the Blanco Drain Diversion components of the Proposed Project is not substantial in relation to total flows. Thus, this diversion would result in a less-than-significant impact on Salinas River flows, and, therefore, a less-than-significant impact on the wetlands associated with the river</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.6 Terrestrial Biological Resources (cont.)</b>				
<p><b>Impact 4.6-8:</b> Conflict with the provisions of an adopted Habitat Conservation Plans, natural community conservation plans or other approved local, regional, or state habitat conservation plan.</p>	<p><b>LSM</b></p> <p>The Transfer Pipeline, Terminal Reservoir, and ASR Pump Station could conflict with the <i>1997 Installation-Wide Multispecies Habitat Management Plan</i> for the former Fort Ord area, which is considered a significant impact. Implementation of the prescribed mitigation measure would reduce the impact to a less-than-significant level.</p> <p>None of the other project components are located within an approved HMP area. Therefore, no impact would result.</p>	<p><b>MM 4.6-8: Management Requirements within Borderland Development Areas along Natural Resource Management Area Interface.</b></p>	<p><b>LSM</b></p> <p>The MPWSP Variant would result in similar types of impacts to those of the proposed project during operations, though with some additional sites where impacts could occur associated with the GWR facilities. Overall, impacts would be less than significant after implementation of mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm facilities under the MPWSP Variant to conflict with an adopted Habitat Conservation Plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan would be identical to the proposed project.</p> <p><u>GWR Facilities:</u></p> <p>There is potential for inconsistency with the local requirements for the Habitat Conservation Plan plant species for components located within the boundaries of former Fort Ord. This impact would be less than significant with implementation of mitigation measures.</p>	<p><b>Mitigation Measure BT-4. HMP Plant Species Salvage.</b></p>
<p><b>Impact BF-1: Habitat Modification Due to Construction of Diversion Facilities.</b></p> <p><i>[Applies to GWR facilities only]</i></p>	<p>Not applicable to proposed project because proposed project would not modify steelhead fish habitat.</p>	<p>None required.</p>	<p><b>LSM</b></p> <p><u>CalAm Facilities:</u></p> <p>Not applicable to CalAm facilities of the MPWSP Variant because the CalAm facilities would not modify steelhead fish habitat.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the proposed Reclamation Ditch and Tembladero Slough diversions could indirectly result in habitat modifications for endangered or threatened fish species as a result of construction activities and dewatering the construction sites. This impact would be less than significant with implementation of mitigation measures.</p>	<p><b>Mitigation Measure BF-1a: Construction during Low Flow Season.</b></p> <p><b>Mitigation Measure BF-1b: Relocation of Aquatic Species during Construction.</b></p> <p><i>[Apply to Reclamation Ditch and Tembladero Slough Diversions only.]</i></p>
<p><b>Impact BF-2: Interference with Fish Migration.</b></p> <p><i>[Applies to GWR facilities only]</i></p>	<p>Not applicable to proposed project because proposed project would not affect stream flows in the Salinas River or Reclamation Ditch.</p>	<p>None required.</p>	<p><b>LSM</b></p> <p><u>CalAm Facilities:</u></p> <p>Not applicable to CalAm facilities of the MPWSP Variant because the CalAm facilities would not affect stream flows in the Salinas River or Reclamation Ditch.</p> <p><u>GWR Facilities:</u></p> <p>Operation of the Proposed Project would result in changes in stream flows that may interfere with fish migration in the Salinas River and Reclamation Ditch. This impact would be less than significant with implementation of mitigation measures.</p>	<p><b>Mitigation Measure BF-2a: Maintain Migration Flows.</b></p> <p><b>Mitigation Measure Alternate BF-2a: Modify San Jon Weir.</b></p> <p><i>[Apply to the Reclamation Ditch Diversion only.]</i></p>
<p><b>Impact BF-3: Reduction in Fish Habitat or Fish Populations Due to Project Operations.</b></p> <p><i>[Applies to GWR facilities only]</i></p>	<p>Not applicable to proposed project because proposed project would not affect stream flows in the Salinas River or Reclamation Ditch.</p>	<p>None required.</p>	<p><b>LS</b></p> <p><u>CalAm Facilities:</u></p> <p>Not applicable to CalAm facilities of the MPWSP Variant because the CalAm facilities would not affect stream flows in the Salinas River or Reclamation Ditch.</p> <p><u>GWR Facilities:</u></p> <p>Operation of the Proposed Project diversions would not reduce the habitat of a fish species or substantially affect fish populations. This impact would be less than significant.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.7 Hazards and Hazardous Materials</b>				
<p><b>Impact 4.7-1:</b> Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials during construction.</p>	<p><b>LS</b> Reasonably foreseeable upset and accident conditions associated with the routine transport, use, and disposal of petroleum products, such as gasoline, diesel fuel, lubricants, and cleaning solvents during construction could result in inadvertent releases of small quantities of these materials to the environment. However, compliance with numerous hazardous materials and stormwater regulations would ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner. Compliance with the regulations would ensure that hazardous construction materials are stored in appropriate containers, with secondary containment to contain a potential release and disposed of appropriately. A SWPPP for construction activities prepared as required by the NPDES General Construction Permit would identify the hazardous materials proposed to be used and describe spill prevention measures, equipment inspection requirements, equipment and fuel storage, and spill response protocols. With compliance with applicable regulations, the impact would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b> The MPWSP Variant would have a similar potential create a significant impact through the routine transport, use, and disposal of construction materials as the proposed project. While slightly less construction would occur for the CalAm facilities, the addition of the GWR facilities would result in an overall increase in the number of sites upon which hazardous materials would be used during construction. Compliance with existing and future hazardous materials laws and regulations would prevent a significant impact from occurring at all sites, and the combined impact for the MPWSP Variant would be less than significant. <u>CalAm Facilities:</u> Potential impacts associated with the routine transport, use, and disposal of hazardous materials during construction of the MPWSP Variant would be essentially the same as for the proposed project, although slightly less because fewer subsurface slant wells would be constructed. The impact would be less than significant. <u>GWR Facilities:</u> All contractors involved in construction of the GWR facilities would be required to comply with existing and future hazardous materials laws and regulations for transport, use, and disposal of hazardous materials and NPDES permitting requirements, including implementation of SWPPP and best management practices for protection of the public and environment due to accidental spills. Construction of the GWR facilities of the MPWSP Variant would result in a less-than-significant impact due to the routine transport, use, or disposal of hazardous materials during construction.</p>	<p>None required.</p>
<p><b>Impact 4.7-2:</b> Reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction.</p>	<p><b>LSM</b> There are typically two types of releases that could occur during construction: (1) the accidental release of hazardous materials that are routinely used during construction activities (addressed above under Impact 4.7-1); and (2) the potential for construction activities to encounter and excavate contaminated soil or groundwater that are already present at the construction site and thus release it to expose new receptors to the hazard which is addressed herein.  Contaminated soil and/or groundwater could be encountered during construction of all proposed project components. The potential for contaminated soil and groundwater to be released into the environment during project construction is therefore considered a significant impact for all project components. However, implementation of the identified mitigation measure and compliance with applicable hazardous materials laws and regulations would reduce the impact to a less-than-significant level.</p>	<p><b>MM 4.7-2a: Health and Safety Plan</b> <b>MM 4.7-2b: Soil and Groundwater Management Plan</b></p>	<p><b>LSM</b> The MPWSP Variant would have a similar potential to result in accidental release of hazardous materials into the environment during construction as the proposed project. While slightly less construction would occur for the CalAm facilities, the addition of the GWR facilities would result in an overall increase in the number sites upon which construction would occur. The combined impact from construction of all MPWSP Variant facilities would be less than significant with mitigation. <u>CalAm Facilities:</u> Impacts involving the accidental release of hazardous materials into the environment during construction of the MPWSP Variant would be essentially the same as those of the proposed project, although slightly less because fewer subsurface slant wells would be constructed. As under the MPWSP, the impact would be less than significant with mitigation. <u>GWR Facilities:</u> Hazardous materials that could be used during construction activities include fuels, lubricants, paints, and solvents. Through compliance with applicable hazardous materials storage and stormwater permitting regulations, the use of hazardous materials impacts potential releases of hazardous materials or petroleum products during construction would be less than significant for all project components.  The Envirostor database identified existing hazardous materials release sites within ¼-mile of the GWR facilities sites. Encountering unanticipated soil or groundwater contamination could result in exposures to construction workers, the public, or the environment, resulting in a potentially significant impact at the following sites proposed for GWR facilities: The impact is considered significant for the following components: the Lake El Estero Diversion, Product Water Conveyance Systems (both options), and the Injection Well Facilities. Implementation of Mitigation Measures would reduce the impact to a less-than-significant level.</p>	<p><b>Mitigation Measure HH-2a: Health and Safety Plan (similar to the 4.7-2a for the MPWSP)</b> <b>Mitigation Measure HH-2b: Contractor HAZWOPER Training)</b> <b>Mitigation Measure HH-2c: Materials Disposal Plan (similar to 4.7-2b for the MPWSP)</b></p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.7 Hazards and Hazardous Materials (cont.)</b>				
<p><b>Impact 4.7-3:</b> Project facilities would be located on a known hazardous materials site.</p>	<p><b>LS</b></p> <p>The proposed Terminal Reservoir, ASR Pump Station, and portions of the Transfer Pipeline, ASR Conveyance Pipelines, and ASR Pump-to-Waste Pipeline would be located within known hazardous materials sites, including the Seaside Munitions Response Area and several specific Munitions Response Sites. However, prior to any construction in these areas, the applicant or its contractor would need to obtain a Right of Entry agreement from the Fort Ord Reuse Authority (FORA) (or the future property owner) and obtain a permit for digging and excavation from the City of Seaside. Compliance with permit application requirements, specific regulations that apply to any ground-disturbing activities within these areas, including the City of Seaside’s Ordnance Remediation District regulations and the environmental protection provisions of the Findings of Suitability for Early Transfer agreement would ensure the impact is less than significant. None of the other proposed project facilities are located within a known hazardous materials sites.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPSWP Variant would have a similar potential impact from locating facilities on known hazardous materials sites as the proposed project. While slightly less construction would occur for the CalAm facilities, the addition of the GWR facilities would result in an overall increase in the number of known contaminated sites upon which construction would occur. Compliance with existing regulations would prevent a significant impact from occurring at all sites, and the combined impact from construction of all MPSWP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>Impacts associated with locating CalAm facilities within a known hazardous materials site under the MPWSP Variant would be identical to that under the proposed project because the MPWSP Variant would include the same components—the Terminal Reservoir, ASR Pump Station, and portions of the Transfer Pipeline, ASR Conveyance Pipelines, and ASR Pump-to-Waste Pipeline—that would be located in known hazardous materials sites. As under the MPWSP the impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>The GWR facilities of the MPWSP variant would be located on known hazardous materials sites. Compliance with existing regulations for construction work at the former Fort Ord would reduce the potential impact of encountering unexploded ordnance by construction workers at the Injection Well Facilities and Transfer Pipeline sites to less than significant. Some project components (both alignments of the Product Water Conveyance Pipelines) are proposed to be located above identified contaminated groundwater. However, these contaminated groundwater plumes are located hundreds of feet below ground surface and construction activities will only occur no lower than the top 30 feet of soil. Therefore, no impact associated with the siting of these facilities on known groundwater contamination sites at the former Fort Ord would occur. None of the other project components would be located on designated known hazardous materials sites pursuant to Government Code Section 65962.5. Therefore, the proposed rroject would have a less than significant impact associated with the siting of these facilities on a known hazardous materials site and no mitigation measures would be required.</p>	<p>None required.</p>
<p><b>Impact 4.7-4:</b> Handle hazardous materials or emit hazardous emissions within 0.25 mile of schools during construction.</p>	<p><b>LS</b></p> <p>Construction activities associated with the Desalinated Water Pipeline, Transmission Main, Transfer Pipeline, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, Monterey Pipeline, and Valley Greens Pump Station (site Option 2) would require that hazardous materials be handled within 0.25 mile of schools during construction. However, compliance with all relevant hazardous materials storage and stormwater permitting requirements would prevent significant adverse effects. Construction of these facilities would also result in short-term emissions of diesel particulate matter (DPM), a toxic air contaminant, within 0.25 mile of schools. However, as discussed in Section 4.10, Air Quality, DPM emissions would be less than the Monterey Bay Unified Air Pollution Control District’s increased cancer risk threshold. Therefore, the impact related to the handling of hazardous materials or generation of hazardous emissions within 0.25 mile of a school during construction of the Desalinated Water Pipeline, Transmission Main, Transfer Pipeline, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, Monterey Pipeline, and Valley Greens Pump Station (site Option 2) would be less than significant.</p> <p>None of the other proposed project components are located within 0.25-mile of a school. No impact would result.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPSWP Variant would have a similar potential impact from constructing facilities within 0.25 miles of a school as the proposed project. While the same potential impact would occur due to construction of CalAm facilities, the addition of the GWR facilities would result in an overall increase in the number of construction sites located within 0.25 miles of a school. Compliance with existing regulations would prevent a significant impact from occurring at all sites, and the combined impact from construction of all MPSWP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>Impacts associated with the construction of the MPWSP Variant would be identical to those of the proposed project because the Variant would include the same components that would be located near schools. As under the MPWSP the impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>The proponent of the GWR facilities of the MPWSP Variant and its contractors would be required to comply with existing and future hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials, therefore the potential impact on schools related to the use of hazardous materials at these sites that are within 0.25-mile would be less than significant and no mitigation measures are necessary.</p>	<p>None required.</p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.7 Hazards and Hazardous Materials (cont.)</b>				
<p><b>Impact 4.7-5:</b> Increase risk of wildland fires during construction.</p>	<p><b>LS</b></p> <p>The project facilities that would be located in or near areas classified by CAL FIRE as High or Very High Fire Hazard Severity Zones are the Main System-Hidden Hills Interconnection Improvements, the Ryan Ranch-Bishop Interconnection Improvements, and the Valley Greens Pump Station (both site options). Compliance with California regulations governing the use of construction equipment in fire-prone areas, the California Fire Code’s general construction fire safety requirements, and any additional requirements imposed by CAL FIRE or the local fire protection departments would ensure that the risk of wildland fires during construction in these areas would be less than significant.</p> <p>None of the other proposed project facilities are located within or near an area classified by CAL FIRE as a High or Very High Fire Hazard Severity Zone; however, construction activities could temporarily increase fire risk. Compliance with California fire code regulations for construction would also ensure that the potential impact associated with an increased risk of fire during construction of the other project components would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPWSP Variant would have a similar potential impact from increased risk of fire due to project construction as the proposed project. While the same CalAm Facilities would be located within high or very high hazard zones, the addition of the GWR facilities would result in an overall increase in the number of construction sites within high or very high hazard zones. Compliance with existing regulations would prevent a significant impact from occurring at all sites, and the combined impact from construction of all MPWSP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>Impacts associated with an increased risk of fire during construction of the MPWSP Variant would be identical to that of the proposed project because the project variant would include the same components that would be located in high or very high hazard zones. Although construction in other areas also could increase the risk of fire and three fewer slant wells would be constructed under the MPWSP Variant, the risk of wildland fire from slant well construction would be negligible since they would be located in a beach environment with little or no vegetation. Therefore there would be no difference in the risk of wildland fire during construction of the CalAm facilities under the MPWSP Variant and, as under the proposed project, the impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>Some GWR facilities of the MPWSP Variant are located in or near areas that are designated by CAL FIRE and the Local Responsibility Areas as High or Very High Fire Hazard areas. Regulations governing the use of construction equipment in fire prone areas are designed to minimize the risk of wildland fires during construction activity. These regulations restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that has an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire prone areas. The construction contractor must comply with the Public Resources Code and any additional requirements imposed by CAL FIRE, and the local fire protection departments; therefore, potential impacts related to wildland fires due to construction activities of the GWR facilities would be less than significant.</p>	<p>None required.</p>
<p><b>Impact 4.7-6:</b> Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials during project operations.</p>	<p><b>LS</b></p> <p>Operations and maintenance activities associated with the MPWSP would involve storage and use of hazardous materials and the transport of hazardous wastes generated during operations to disposal sites. Periodic (every five years or so) maintenance of the subsurface slant wells would be permitted similar to construction of the subsurface slant wells and would require preparation of a SWPPP in accordance with the NPDES General Construction Permit. The SWPPP would identify the hazardous materials to be used during slant well maintenance and would describe spill prevention measures, equipment inspection requirements, equipment and fuel storage, and spill response protocols. Compliance with applicable laws and regulations regarding the safe transport, use, and storage of hazardous materials and the transport and disposal of hazardous and nonhazardous wastes generated by maintenance activities would ensure this impact is less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPWSP Variant would have a similar potential impact from transport, use and disposal of hazardous materials during project operations as the proposed project. While slightly less hazardous materials would be used at the CalAm facilities, the addition of the GWR facilities would result in an overall increase in the number of sites at which hazardous materials would be used during project operation. Compliance with existing regulations would prevent a significant impact from occurring at all sites, and the combined impact from operation of all MPWSP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>Impacts associated with the operation of the MPWSP Variant would be essentially the same as those of the proposed project, although slightly less because chemical usage associated with operation of a 6.4 mgd desalination plant and periodic maintenance of the subsurface slant wells would be reduced relative to the proposed project. As under the MPWSP, with compliance with hazardous materials regulations potential environmental impacts resulting from an accidental release of hazardous materials would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>The GWR facilities of the MPWSP Variant would be in compliance with existing state and federal regulations regarding hazardous materials storage and management. The routine transport, use, or disposal of hazardous materials associated with the GWR facilities would not create a significant hazard to the public or the environment. This is a less than significant impact and no mitigation measures would be required.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.7 Hazards and Hazardous Materials (cont.)</b>				
<p><b>Impact 4.7-7:</b> Handle hazardous materials or emit hazardous emissions within 0.25 mile of a school during project operations.</p>	<p><b>LS</b></p> <p>Of the proposed project components that would be located within 0.25 mile of a school (see <b>Table 4.7-2</b>), only the Valley Greens Pump Station (site Option 2) would handle hazardous materials and generate hazardous emissions. The storage and intermittent use diesel fuel for routine testing and emergency use of the generator would not result in hazardous materials releases or emissions that would cause harmful exposures to individuals at nearby schools. Therefore, the impact would be less than significant for the Valley Greens Pump Station (site Option 2).</p> <p>All other proposed project facilities are located at distances greater than 0.25 mile from existing schools and/or would not involve the routine handling of hazardous materials or generation of hazardous materials during operations and maintenance. Therefore, no impact would result from operation and maintenance of all other project facilities.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPWSP Variant would have a similar potential impact from handling hazardous materials within 0.25 mile of a school during project operations as the proposed project. While the same CalAm facilities would be located within 0.25 mile of a school, the addition of the GWR facilities would result in an overall increase in the number of sites within 0.25 mile of a school upon which hazardous materials are used during project operations. However, compliance with existing regulations would prevent a significant impact from occurring at all sites, and the combined impact from operation of all MPWSP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>The impact associated with handling hazardous materials or emitting hazardous emissions during operation of the MPWSP Variant would be the same as that of the proposed project because the project variant would include the same facilities located within 0.25 mile of schools. Same as the proposed project, the impact would be less than significant for Valley Greens Pump Station (site Option 2) and no impact would result from implementation of the other project facilities.</p> <p><u>GWR Facilities:</u></p> <p>Operation of the GWR facilities of the MPWSP Variant would not result in an impact related to hazardous emissions within 0.25 miles of an existing or proposed school. Only one school would be located within 0.25 of any facility where project operations may involve handling hazardous or acutely hazardous materials, substances, or waste. Specifically, CSUMB is located adjacent to and within the project areas of the sites proposed for the Booster Pump Station. All GWR facilities would be in compliance existing and future hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials, during operation. The only routine use of hazardous materials would be the use of lubricants at the Booster Pump Station site (both the Coastal and RUWAP options). Periodic use of lubricants at the Booster Pump Station site would not result in a hazardous materials impact on students, faculty, visitors, or staff of CSUMB.</p>	<p>None required.</p>
<p><b>Impact 4.7-8:</b> Project facilities are located within an airport land use plan area, presenting a potential safety hazard for people residing or working in the project area.</p>	<p><b>LS</b></p> <p>The following MPWSP components are located within or near an airport planning area: The MPWSP Desalination Plant, Desalinated Water Pipeline, Brine Discharge Pipeline, and Salinas Valley Return Pipeline would be located at the edge of the Marina Municipal Airport's planning area boundary; however, no proposed facilities are within the airport traffic pattern zone or approach protection zone defined in the Comprehensive Land Use Plan for the Marina Municipal Airport. The Transmission Main, Transfer Pipeline, Monterey Pipeline, and Ryan Ranch-Bishop Interconnection Improvements would be located within the Monterey Peninsula Airport planning area but none of the proposed facilities would be located within the runway safety area. Further, because these improvements would be underground, they would not create any obstruction of open space areas or potential safety hazard for people residing or working in the project area.</p> <p>No other project facilities are located within an airport land use plan area.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPWSP Variant would have a similar potential impact from locating facilities within an airport land use plan area as the proposed project. None of the CalAm facilities or GWR facilities would result in a significant safety hazard, and the combined impact of construction and operation of all MPWSP Variant facilities would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>Impacts associated with the construction of the MPWSP Variant would be identical to those of the proposed project because the MPWSP Variant would include the same CalAm facilities that would be located in the vicinity of the Marina Municipal Airport and Monterey Peninsula Airport. As under the MPWSP, the impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>The Monterey Regional Airport is within two miles of the Injection Well Facilities, Lake El Estero Source Water Diversion Site, and the CalAm Water Distribution System: Monterey and Transfer Pipelines. The airport's land use plan shows the boundary for its Approach Protection Zone and Runway Protection Zone, both of which do not coincide with any of the aforementioned facilities. The Lake El Estero Source Water Diversion site is within the Monterey Airport Influence Area (AIA). All of the proposed upgrades at the Lake El Estero Diversion site will be entirely underground and will not have an effect on the AIA. Therefore, the construction and operation of the Injection Well Facilities, Lake El Estero Source Water Diversion Site, and the Cal-Am Water Distribution System: Monterey and Transfer Pipelines will not interfere with Monterey Regional Airport, nor will any of the facilities be subject to any development limitations (Monterey Peninsula Airport Land Use Plan, 1987). The Marina Municipal Airport lies within 2 miles of the Proposed Project Advanced Water Treatment Facility. The airport adopted a Comprehensive</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

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<b>4.7 Hazards and Hazardous Materials (cont.)</b>				
Impact 4.7-8 (cont.)			Land Use Plan in 1996 to ensure that surrounding land use development is compatible and does not cause a hazard to aircraft in flight. In addition, the plan includes an Approach Protection Zone and a Runway Protection Zone, which limit development to low density land uses. An approximately 2,000-foot long portion of the Product Water Conveyance Pipeline is within the Approach Protection Zone and an approximately 50-foot long portion is within the Runway Protection Zone (Monterey County Airport Land Use Commission, 1996). No proposed buildings or structures are located within these zones, and therefore Project construction and operation would not result in a safety hazard for people working in the project area due to its proximity to the Marina Municipal Airport. Therefore this impact would be less than significant.	
<b>4.8 Land Use, Land Use Planning, and Recreation</b>				
Impact 4.8-1: Consistency with applicable plans, policies, and regulations related to land use and recreation that were adopted for the purpose of mitigating an environmental effect.	<b>LS</b> The plans, policies, and regulations related to land use and recreation in <b>Table 4.8-2</b> reflect the long-term visions of the respective jurisdictions with respect to land use and development and are not directly relevant to construction activities. Further, any construction-related effects on adjacent land uses and recreation would be temporary; no long-term disruptions would occur. None of the proposed project components would conflict with plans, policies, and regulations related to land use compatibility and protection of land use values, development clustering, protection of public access and recreational opportunities, and coastal-dependency and priority land uses in the coastal zone. Overall, the proposed project would have a less-than-significant effect with respect to land use and recreational policy conflicts.	None required.	<b>LS</b> <u>CalAm Facilities:</u> The consistency of the proposed CalAm facilities of the MPWSP Variant with applicable plans and policies pertaining to land use and recreation would be identical to the proposed project (less than significant). <u>GWR Facilities:</u> As indicates in <b>Table 6-8</b> , the GWR facilities would be consistent with all plans, policies, and regulations pertaining to land use, land use planning, and recreation.	See <b>Table 6-8</b> .
<b>4.9 Traffic and Transportation</b>				
Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.	<b>LSM</b> Project-related construction activities would result in a temporary increase in traffic from construction workers and trucks traveling to and from the construction work areas. Although the estimated maximum increase in traffic along regional roadways would remain within the carrying capacities of the regional roadways and would not substantially affect traffic flow, construction-related traffic increases along local and neighborhood (residential) streets could result in adverse traffic conditions. This impact would be less than significant for all project components located north of Reservation Road and the Valley Greens Pump Station. This impact would be potentially significant for the Transmission Main, Transfer Pipeline, ASR Pump Station, Terminal Reservoir, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, ASR-5 and ASR-6 Wells, Monterey Pipeline, Ryan Ranch-Bishop Interconnection Improvements, and Main System-Hidden Hills Interconnection Improvements. The impact would be reduced to a less-than-significant level with implementation of the identified mitigation measure.	<b>MM 4.9-1: Traffic Control and Safety Assurance Plan.</b>	<b>LSM</b> The MPWSP Variant would have a similarly less-than-significant effect on local roadways due to construction trips compared to the proposed project. While there would be fewer overall construction-related trips from the CalAm facilities than under the proposed project, the potential maximum daily traffic associated with construction of the CalAm facilities would be the same as for the proposed project. The addition of GWR facilities would result in an overall increase in construction-related trips on local roadways compared to the proposed project. Construction of the GWR facilities would overlap with construction of the CalAm facilities for almost two years. Assuming a worse-case scenario of overlapping construction at all GWR and CalAm facilities along Highway 1, the combined temporary traffic from construction of both CalAm and GWR facilities would result in an increase in average daily trips on the highway of 417 total one-way trips north of Reservation Road, 461 total one-way trips south of Reservation Road, and 228 total one-way trips north of Fremont Boulevard. This represents an increase of one percent or less. This temporary increase would be within daily traffic fluctuations along the highway and would not cause a substantial increase in traffic relative to existing conditions and roadway capacity, or contribute substantial volumes of traffic during peak hours at all of the GWR facilities sites. The combined impact would be mitigated to a less-than-significant level. <u>CalAm Facilities:</u> Although the overall number of temporary construction-related trips would be reduced compared to the proposed project because three fewer wells would be constructed, with a commensurate reduction in slant well worker vehicle trips and truck trips, the potential maximum daily traffic increases on Highway 1 would be the same as for the proposed project: 326 total one-way trips north of Reservation Road, 163 total one-way trips south of Reservation Road, and 228 total one-way trips north of Fremont Blvd. Therefore, the impacts on temporary traffic increases on Highway 1 associated with the CalAm facilities would be similar to those under the proposed project (less than significant for the same components and potentially significant and mitigable to less than significant for the others).	None Required

**TABLE ES-4 (Continued)  
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<b>4.9 Traffic and Transportation (cont.)</b>				
<b>Impact 4.9-1 (cont.)</b>			<p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities of the MPWSP Variant would result in a temporary increase in traffic from construction workers and trucks traveling to and from the construction work areas. The potential maximum daily traffic increases on Highway 1 would be: 91 total one-way trips north of Reservation Road and 298 total one-way trips south of Reservation Road. Given the anticipated split of worker shifts, most of the daily traffic would be outside of the peak traffic periods, except for construction worker traffic in the morning. Temporary construction traffic would not cause a substantial increase in traffic relative to existing conditions and roadway capacity, or contribute substantial volumes of traffic during peak hours at all of the GWR facilities sites. The impact is less than significant and no mitigation measures are required.</p>	
<b>Impact 4.9-2:</b> Temporary reduction in roadway capacities and increased traffic delays during construction.	<p><b>LSM</b></p> <p>Traffic delays resulting from temporary lane closures and detours would be a potentially significant but mitigable impact for all of the proposed pipelines; the impact would be reduced to a less-than-significant level with implementation of the identified mitigation measure. For all other proposed facilities, the impact would be less than significant because none of the non-linear facilities are expected to require temporary lane closures or detours.</p>	<p><b>MM 4.9-1: Traffic Control and Safety Assurance Plan.</b></p>	<p><b>LSM</b></p> <p>Temporary effects on roadway capacity and delays resulting from construction would be similar under the MPSWP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary lane closures would occur. However, the combined impact would be mitigated to a less than significant level.</p> <p><u>CalAm Facilities:</u></p> <p>Traffic delays resulting from temporary reduction in roadway capacity during construction would be the same as under the proposed because the MPWSP Variant would include construction of the same pipelines as the proposed project. However, like the proposed project, the significant impact could be reduced to a less-than-significant level with implementation of the identified mitigation measure.</p> <p><u>GWR Facilities:</u></p> <p>Traffic delays resulting from temporary lane closures and detours could result in delays to motorists and would be a potentially significant impact, but the effects would be short-term in duration for any one location. The construction of the GWR facilities of the MPWSP Variant could have temporary and intermittent effects on traffic flow and may cause delays for Monterey- Salinas Transit bus service on some segments of roadway. Delays and interruptions would be temporary and would be dependent on the type of roads and area where the segment is being constructed. However, with implementation of <b>Mitigation Measure TR-2 (Traffic Control and Safety Assurance Plan)</b>, which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.</p>	<p><b>MM TR-2: Traffic Control and Safety Assurance Plan.</b></p>
<b>Impact 4.9-3:</b> Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.	<p><b>LSM</b></p> <p>Potential increases in traffic safety hazards during construction would result in a significant impact for all project facilities due to (1) conflicts between haul trucks and other large construction vehicles and automobiles, bicyclists, and pedestrians using the roadways; (2) conflicts related to the movement of traffic on travel lanes adjacent to construction work areas, particularly at entry and egress points where construction-related vehicles would access public roadways; and (3) confusion on the part of bicyclists and pedestrians due to temporary changes in bicycle and pedestrian circulation along the Monterey Peninsula Recreational Trail, designated bicycle routes, and other sidewalks and public pathways. Implementation of the identified MM would reduce the impact to a less-than-significant level.</p>	<p><b>MM 4.9-1: Traffic Control and Safety Assurance Plan.</b></p>	<p><b>LSM</b></p> <p>Temporary effects on roadway safety due to construction activities would be similar under the MPSWP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary safety effects could occur. However, the combined impact would be mitigated to a less than significant level.</p> <p><u>CalAm Facilities:</u></p> <p>With the exception of a negligible reduction in daily construction worker vehicle trips and truck trips associated with construction of seven slant wells rather than 10 slant wells, the temporary impact associated with increases in traffic safety hazards for vehicles, bicyclists, and pedestrians during construction of the CalAm facilities would be identical to those under the proposed project. Like the proposed project, the significant impact associated with temporary increases in traffic safety hazards during construction of the CalAm facilities would be reduced to a less-than-significant level with implementation of the prescribed mitigation measure).</p> <p><u>GWR Facilities:</u></p> <p>Safety hazards due to conflicts between large construction related vehicles and automobiles, bicyclists, and pedestrians may occur as a result of the construction of the GWR facilities of the MPWSP Variant. Safety Hazards may also occur due to the movement of traffic on travel lanes adjacent to construction work areas, particularly at entry and egress points where construction-</p>	<p><b>MM TR-2: Traffic Control and Safety Assurance Plan.</b></p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.9 Traffic and Transportation (cont.)</b>				
Impact 4.9-3 (cont.)			related vehicles would access public roadways. However, with implementation of <b>Mitigation Measure TR-2 (Traffic Control and Safety Assurance Plan)</b> , which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.	
Impact 4.9-4: Impaired emergency access during construction.	<p><b>LSM</b></p> <p>Temporary reductions in travel lanes and roadway capacity during construction of pipelines within travel lanes and road shoulders could result in delays for emergency vehicles. Trenching and paving along roadways during pipeline construction could also disrupt emergency vehicle access to adjacent land uses. Impaired emergency access during construction is considered a significant impact for all proposed pipelines; implementation of the identified MM would reduce the impact to less than significant. Construction of the other proposed facilities would result in a less-than-significant impact related to impeded emergency access because the associated construction activities and staging areas are not expected to be located in roadways or road shoulders and therefore would not obstruct emergency vehicle access to adjacent land uses.</p>	<p><b>MM 4.9-1: Traffic Control and Safety Assurance Plan.</b></p>	<p><b>LSM</b></p> <p>Temporary effects on emergency access due to construction activities would be similar under the MPWSP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary effects on emergency access could occur. However, the combined impact would be mitigated to a less than significant level.</p> <p><u>CalAm Facilities:</u></p> <p>Impaired emergency access during pipeline construction would be the same as under the proposed project (potentially significant and mitigable to less than significant) because the MPWSP Variant would involve construction of the same pipelines. Construction of the other proposed CalAm facilities would also be the same as under the proposed project: construction of the other facilities would be less than significant because they would not be located within roadways or road shoulders.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities of the MPWSP Variant would result in temporary reductions in travel lanes and the roadway capacities to accommodate work areas could result in delays for emergency vehicles. Trenching and paving along roadways during pipeline installation could also disrupt emergency vehicle access to adjacent land uses. However, with implementation of <b>Mitigation Measure TR-2 (Traffic Control and Safety Assurance Plan)</b>, which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.</p>	<p><b>MM TR-2: Traffic Control and Safety Assurance Plan.</b></p>
Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.	<p><b>LSM</b></p> <p>Pipeline construction activities could temporarily affect public transportation and bicycle and pedestrian travel along affected roadways and recreational trails in the project area, including Del Monte Boulevard, the Monterey Peninsula Recreational Trail, and the TAMC right-of-way. Pipeline construction in vehicle travel lanes could disrupt access to bus stops operated by Monterey-Salinas Transit, require that bus stops be temporarily relocated, and conflict with bicycle traffic along roads with designated bike lanes. Pipeline construction within or adjacent to the Monterey Peninsula Recreational Trail and TAMC right-of-way could conflict with bicycle and pedestrian traffic along these trails. The impact associated with temporary disruptions to public transportation, bicycle, and pedestrian facilities during pipeline construction would be potentially significant, but would be reduced to a less-than-significant level with implementation of the identified mitigation measure. Construction of all other project components (subsurface slant wells, MPWSP Desalination Plant, ASR injection/extraction wells, Terminal Reservoir, ASR Pump Station, and Valley Greens Pump Station) would occur in off-road areas and would not impede vehicular, bicycle, or pedestrian traffic flow or disrupt public transportation; therefore, the impact of construction of these facilities on public transportation and bicycle and pedestrian facilities would be less than significant.</p>	<p><b>MM 4.9-1: Traffic Control and Safety Assurance Plan.</b></p>	<p><b>LSM</b></p> <p>Temporary effects on public transportation and bicycle and pedestrian facilities due to construction activities would be similar under the MPWSP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary effects on public transportation and bicycle and pedestrian facilities could occur. However, the combined impact would be mitigated to a less than significant level.</p> <p><u>CalAm Facilities:</u></p> <p>Temporary construction-related disruptions to public transportation and bicycle and pedestrian facilities from pipeline construction would be the same as those under the proposed project (potentially significant and mitigable to less than significant) because the MPWSP Variant would involve construction of the same pipelines. As under the proposed project, construction of the other proposed facilities would be less than significant because construction of these other facilities would occur in off-road areas and would not impede the flow of vehicular, bicycle, or pedestrian traffic or disrupt public transportation.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities of the MPWSP Variant would result in temporary disruptions due to lane closures and detours. During construction, bicyclists and pedestrians could be required to enter the adjacent road shoulder or use other temporary detours to circumvent construction work areas. However, with implementation of <b>Mitigation Measure TR-2 (Traffic Control and Safety Assurance Plan)</b>, which includes measures to minimize the adverse effects of roadway construction and detours, these impacts would be reduced to a less-than-significant level.</p>	<p><b>MM TR-2: Traffic Control and Safety Assurance Plan.</b></p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.9 Traffic and Transportation (cont.)</b>				
<p><b>Impact 4.9-6:</b> Increased wear-and-tear on the designated haul routes used by construction vehicles.</p>	<p><b>LSM</b> The use of trucks to transport equipment and material to and from the construction work areas could increase the rate of road wear on the designated haul routes. The degree to which this impact would occur depends on the roadway design (pavement type and thickness) and the existing condition of the road. Because freeways and major arterials are designed to handle a mix of vehicle types, including heavy trucks, the impact of project-related construction traffic on those roads is expected to be negligible. However, project-related construction truck-trips could cause excessive wear-and-tear on some of the smaller roadways and residential streets that may not have been constructed to support use by heavy construction trucks and vehicles. This would be a significant impact for all project components but would be reduced to a less-than-significant level with implementation of the identified mitigation measure.</p>	<p><b>MM 4.9-6: Roadway Rehabilitation Program.</b></p>	<p><b>LSM</b> The MPWSP Variant would have a similar effect on road wear due to construction-related traffic as the proposed project. While there would be fewer construction-related trips from the CalAm Facilities than under the proposed project, the addition of GWR facilities would result in an overall increase in construction-related trips on local roadways compared to the proposed project. The combined impact would be mitigated to a less-than-significant level. <u>CalAm Facilities:</u> Road wear from temporary construction-related traffic increases would be the same as under the proposed project, with one exception: there would be fewer construction-related vehicle trips associated with slant well construction because three fewer slant wells would be constructed. Because this decrease in vehicle trips represents a very small part of total construction traffic for the proposed CalAm facilities, the impact associated with the CalAm facilities overall would be very similar to the impact under the proposed project (less than significant with implementation of mitigation measures). <u>GWR Facilities:</u> The use of trucks to transport equipment and material to and from the construction work areas could affect road conditions on the designated haul routes by increasing the rate of road wear. The degree to which this impact would occur depends on the roadway design and the existing condition of the road. Construction of the GWR facilities of the MPWSP Variant could adversely affect road conditions on local roadways. However, with implementation of <b>Mitigation Measure TR-3 (Roadway Rehabilitation Program)</b>, this impact would be reduced to a less-than-significant level.</p>	<p><b>MM TR-3: Roadway Rehabilitation Program.</b></p>
<p><b>Impact 4.9-7:</b> Parking interference during construction.</p>	<p><b>LSM</b> Installation of the proposed Monterey Pipeline through mixed-use commercial areas and residential neighborhoods in downtown Monterey would displace parking spaces along the affected roadways that have on-street parking, and could adversely affect parking conditions. In addition, construction worker parking demand associated with these construction activities could further limit parking in the downtown area. Parking interference impacts during installation of the Monterey Pipeline within road rights-of-way in downtown Monterey (i.e., within the city of Monterey) would be significant. However, implementation of the identified MM would reduce the impact to a less-than-significant level.  Construction of all other proposed pipelines, the proposed improvements to the ASR system, Terminal Reservoir, Valley Greens Pump Station, and the Highway 68 satellite system interconnection improvements would result in a less-than-significant parking impact because ample parking is available in these areas to accommodate the temporary increase in parking demand. Construction of the subsurface slant wells and MPWSP Desalination Plant would have no impact on parking because construction worker parking would be accommodated within the construction work areas.</p>	<p><b>MM 4.9-7: Construction Worker Parking Requirements.</b></p>	<p><b>LSM</b> Temporary effects on parking due to construction activities would be similar under the MPWSP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary effects on parking could occur. However, the combined impact would be mitigated to a less than significant level. <u>CalAm Facilities:</u> Temporary parking impacts during construction of the CalAm facilities would be identical to those of the proposed project. <u>GWR Facilities:</u> Construction activities associated with some of the components of the GWR facilities of the MPWSP Variant could result in potentially significant parking impacts due to temporary increases in parking demand and the displacement of on-street parking along pipeline alignment corridors. Implementation of <b>Mitigation Measure TR-4 (Construction Worker Parking Requirements)</b> would reduce this impact to a less-than-significant level.</p>	<p><b>MM TR-4: Construction Parking Requirements.</b></p>
<p><b>Impact 4.9-8:</b> Long-term traffic increases on regional and local roadways during project operations and maintenance.</p>	<p><b>LS</b> Long-term traffic increases associated with ongoing operations and maintenance of the MPWSP Desalination Plant would be less than significant because the number of daily vehicle trips associated with worker commutes and truck deliveries would be negligible relative to existing conditions. All other proposed facilities would be operated remotely using Supervisory Control and Data Acquisition (SCADA) systems, with periodic visits by CalAm personnel for operations review and maintenance. Vehicle trips generated by these periodic site visits would be similar in number to those required for existing CalAm operations in the Monterey District service area and would not constitute a significant increase in new vehicle trips on area roadways. Therefore, this impact is less than significant for all proposed project facilities.</p>	<p>None required.</p>	<p><b>LS</b> Long-term traffic increases on area roadways would be similar under the MPWSP Variant as under the proposed project. The GWR facilities would add 18 daily trips, six of which would be in a location served by the same access road as the proposed desalination plant. The combined trips on area roadways would not affect road operations or performance, and would result in a less than significant impact. <u>CalAm Facilities:</u> Long-term traffic increases associated with operation and maintenance of the CalAm facilities would be identical to those of the proposed project because the operation and maintenance activities would be the same.</p>	<p>None Required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.9 Traffic and Transportation (cont.)</b>				
Impact 4.9-7 (cont.)			<p><u>GWR Facilities:</u></p> <p>A total of nine potential new employees would result in an increase of approximately 18 daily trips spread out throughout the vicinity of the GWR facilities. Approximately half of the trips would be to the treatment plant site north of the city of Marina. The number of daily vehicle trips associated with worker commutes, deliveries, and activities associated with the operation and maintenance of all GWR facilities would be small relative to existing conditions. Operation and routine maintenance of the GWR facilities of the MPWSP Variant would not substantially increase traffic volumes on local or regional roadways and the impact would be less than significant and no mitigation measures are required.</p>	
<b>4.10 Air Quality</b>				
<p><b>Impact 4.10-1:</b> Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.</p>	<p><b>LSM</b></p> <p>Project construction would involve the use of a variety of off-road diesel-fueled equipment, including graders, backhoes, and excavators, that would generate emissions of criteria air pollutants at the construction sites. Delivery trucks, construction vehicles, and workers' vehicles would generate exhaust emissions along the local and regional road network. Fugitive dust would be generated by vegetation removal, grading, and other earthwork activities, as well as by the movement of heavy construction trucks on unpaved access roads.</p> <p>Short-term emissions associated with construction of the MPWSP could contribute to an exceedance of a state and/or federal standard for PM<sub>10</sub> based on the estimated maximum daily mass emissions level of 234 pounds, which would exceed the MBUAPCD significance threshold of 82 pounds per day for PM<sub>10</sub>. However, with implementation of the identified mitigation, these emissions would be reduced to 63 pounds per day, which would reduce the impact to a less-than-significant level. Short-term construction emissions associated with other criteria pollutants, including ozone precursors (i.e., ROG and NO<sub>x</sub>), would not be expected to contribute to an exceedance of an ambient air quality standard and the associated impact for all other criteria pollutants would be less than significant.</p>	<p><b>MM 4.10-1a: Construction Fugitive Dust Control Plan.</b></p> <p><b>MM 4.10-1b: Stabilize Dust on Terminal Reservoir/ASR Pump Station Access Road.</b></p> <p><b>MM 4.10-1c: Idling Restrictions.</b></p>	<p><b>SUM</b></p> <p>See <b>Table 6-17</b> in Section 6.3.4. The impact associated the short-term emissions of criteria air pollutants during construction of the CalAm facilities under the MPWSP Variant would be similar to that under the MPWSP. The CalAm facilities under the MPWSP Variant (without the Monterey and Transfer Pipelines) would result in a maximum daily mass emissions level of 230 pounds PM<sub>10</sub>. Maximum daily on-site construction PM<sub>10</sub> emissions from all GWR facilities (and the Monterey and Transfer Pipelines) were estimated to be 145 pounds. Assuming the maximum day emissions for construction of the CalAm facilities and the GWR facilities occur on the same day, total combined maximum day emissions of the MPWSP Variant would be approximately 375 pounds, which would exceed the MBUAPCD significance threshold of 82 pounds per day for PM<sub>10</sub>. With implementation of the identified mitigation, these emissions would be reduced to 124 pounds per day, which would continue to exceed the significance threshold. Therefore, total combined maximum day emissions of the MPWSP Variant would result in a significant unavoidable impact even with mitigation.</p> <p>Also like the MPWSP, short-term emissions under the MPWSP Variant associated with other criteria pollutants, including ozone precursors, during construction would be less than significant.</p>	<p><b>MM AQ-1: Construction Fugitive Dust Control Plan.</b></p>
<p><b>Impact 4.10-2:</b> Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during construction.</p>	<p><b>LS</b></p> <p>MPWSP construction activities would result in the short-term generation of DPM emissions (in the form of PM<sub>2.5</sub>) and objectionable odors from the use of off-road diesel equipment and from on-road heavy-duty trucks. These emissions could result in the short-term exposure of local sensitive receptors to TACs and objectionable odors.</p> <p>The highest DPM emissions would be generated during construction of the MPWSP Desalination Plant and the subsurface slant wells; however, these facilities would be constructed at sufficient distances (i.e., over 2,000 feet) from the closest sensitive receptors and would not expose sensitive receptors to substantial pollutant concentrations. For all other proposed facilities (the closest of which are located within 50 to 100 feet of sensitive receptors), the duration of exposure for any individual receptor would range from several days (for pipelines) to 18 months (for the ASR improvements). Because the duration of exposure would be limited to a small fraction of the 70-year exposure period used in health risk assessments, the emissions generated during construction of all other MPWSP facilities would also result in a less-than-significant impact to nearby sensitive receptors.</p> <p>Construction of the MPWSP would not expose a substantial number of people to objectionable odors because The only odors resulting from construction activities would be from the use of diesel-fueled equipment. Because these odors would be temporary and would dissipate quickly, it is unlikely that they would affect a substantial number of people. The impact would be less than significant for all MPWSP facilities.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>Exposure of sensitive receptors to substantial pollutant concentrations or objectionable odors would be the same under the MPWSP Variant as under the MPWSP for the same reasons (the distance from and/or duration of exposure to pollutant concentrations and the limited and transient nature of odors that would be created). As under the proposed MPWSP, the impact would be less than significant.</p> <p>Construction of the GWR facilities would expose sensitive receptors to temporary emissions of toxic air contaminants while construction takes place in the vicinity of sensitive receptors. Sensitive receptors that would experience continuous exposures are not located within typical screening distances (tables developed for evaluating TAC impacts from construction projects by other California air districts), and construction activities are not anticipated to result in significant exposures of TACs to sensitive receptors.</p> <p>There may be intermittent odors from construction associated with diesel exhaust that could be noticeable at times to residences in close proximity to the GWR facilities. However, given the distance (minimum of 450 feet) 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.</p> <p>Because the emissions associated with construction of the CalAm facilities and the GWR facilities of the MPWSP Variant would be generated in different locations, emissions exposure to sensitive receptors would not be incrementally increased, the impact would be less than significant and mitigation would not be required.</p>	<p>None Required.</p>



**TABLE ES-4 (Continued)**  
**COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

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<b>4.10 Air Quality (cont.)</b>				
<p><b>Impact 4.10-3:</b> Long-term increase of criteria pollutant emissions that could affect regional air quality during project operations.</p>	<p><b>LS</b></p> <p>Direct emission sources associated with facility operations would include emergency standby generators at the MPWSP Desalination Plant, Valley Greens Pump Station, and Terminal Reservoir/ASR Pump Station. Securing permits from the MBUAPCD for the emergency generators would ensure less-than-significant operational impacts related to the use of such generators through adherence to MBUAPCD Rule 1010. Mobile emission sources would include the daily commute trips of up to 30 facility operators and support personnel and three daily delivery truck trips that would be required to operate the desalination facilities. The combined emissions associated with the direct and mobile emissions sources would not exceed any MBUAPCD CEQA significance thresholds for criteria pollutants (e.g., maximum day NOx emissions would be 46 pounds, which would be less than the 137 pound/day threshold). Therefore, the operational emissions of the MPWSP would not adversely affect regional air quality and the impact would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The impact of long term criteria pollutant emissions from operation of the CalAm facilities of the MPWSP Variant would be the similar to that of the MPWSP, although maximum daily emissions would be slightly lower (e.g., 39 pounds/day NO<sub>x</sub>) because the required emergency standby generator would have a smaller engine size (approximately 800 horsepower [hp] compared to approximately 1,000 hp under the MPWSP). Mobile source emissions associated with the CalAm facilities would be the same as for the proposed project because the same facilities and operation and maintenance activities would be involved.</p> <p>Operation of the GWR facilities would rely upon electricity supplied by the Pacific Gas and Electric Company's existing regional power grid and would generate small amounts of traffic. GWR facilities would not require emergency back-up generators because the new facilities can be shut down during temporary power outages. GWR facilities would not result in any new stationary sources of air pollutant emissions. Accordingly, operation of the GWR facilities would be expected to result in fewer daily emissions than the CalAm facilities, and the combined emissions of the MPWSP Variant would be substantially less than the significance thresholds. The impact would be less than significant.</p>	<p>None Required.</p>
<p><b>Impact 4.10-4:</b> Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during operations.</p>	<p><b>LS</b></p> <p>The only DPM emissions sources associated with MPWSP operations would be the emergency standby generators at the MPWSP Desalination Plant, ASR Pump Station, and the Valley Greens Pump Station. Routine testing and operation of the emergency generators would generate a negligible amount of DPM emissions. The generator emissions would not exceed the MBUAPCD TAC significance threshold for increased health risks. Therefore, the impact would be less than significant for the MPWSP Desalination Plant, ASR Pump Station, and the Valley Greens Pump Station.</p> <p>None of the other project facilities would include on-site DPM emissions sources. Therefore, no impact related to the exposure of sensitive receptors to substantial pollutant concentrations would result from operation of all other MPWSP facilities.</p> <p>Long term operations associated with the MPWSP would not create objectionable odors that could affect a substantial number of people because the MPWSP Desalination Plant would be designed with odor control features and operational controls to limit and contain odors. Further, the MPWSP Desalination Plant site is located at least 2,000 feet away from the closest residences and in an industrial area with existing sources of objectionable odors. Therefore, operational impacts related to the creation of objectionable odors affecting a substantial number of people would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>Neither the CalAm facilities nor the GWR facilities would result in a significant impact from exposure of sensitive receptors to substantial pollutant contributions or odors from project operation. Further, the CalAm facilities and GWR facilities are not located close enough to one another to result in significant combined impact from exposure of sensitive receptors to substantial pollutant contributions or odors from project operation. The combined impact of the MPWSP Variant would be less than significant.</p> <p>The GWR facilities of the MPWSP Variant would include a new AWTF at the existing Regional Treatment Plant and modifications to the existing Salinas Valley Reclamation Plant where treatment-related odors are already produced. However, the AWTF processes are not anticipated to result in generation of any additional odors. The existing odors at the Regional Treatment Plant occur primarily in the head works and the initial part of the secondary treatment facilities. The AWTF process begins after the full secondary treatment when odors should not be present. One of the first treatment processes of the Advanced Water Treatment—ozonation—would be expected to eliminate any remaining wastewater constituents with odors, if they should occur. Currently, treatment chemicals are added to the wastewater stream at the Salinas Pump Station to reduce sulfides, thereby reducing the odor. The addition of this new stream of wastewater from agricultural/produce washing uses and would not contain strong odors comparable to municipal wastewater. In addition, the closest receptors to the pump station are 1,400 feet or further. No other new sources waters would produce objectionable odors. Frequent objectionable odors are not anticipated from any GWR facilities and this is a less than significant impact. No mitigation measures would be required.</p>	<p>None Required.</p>
<b>4.11 Greenhouse Gas Emissions</b>				
<p><b>Impact 4.11-1:</b> Incremental contribution to climate change from GHG emissions generated by the proposed project.</p>	<p><b>SUM</b></p> <p>Implementation of the MPWSP would result in short-term construction and long-term operational emissions of GHGs. The sum of GHG emissions generated by MPWSP construction amortized over the 40-year project lifetime and the net annual emissions generated by project operation would total approximately 6,181 metric tons CO<sub>2</sub>e per year. These emissions would exceed the 2,000 metric tons per year significance threshold; therefore, a significant impact would occur.</p> <p>Implementation of the identified mitigation would ensure construction activities are conducted in a fuel-efficient manner and would reduce the overall carbon footprint of the MPWSP. Although implementation of the identified mitigation would reduce the overall carbon footprint of the MPWSP, the CPUC cannot substantiate that the mitigated GHG</p>	<p><b>MM 4.11-1: GHG Emissions Reduction.</b></p> <p><b>MM 4.18-1: Construction Equipment Efficiency Plan.</b></p>	<p><b>SUM</b></p> <p>See Table 6-18 in Section 6.3.5. The sum of GHG emissions generated by the CalAm facilities of the MPWSP Variant construction amortized over the 40-year project lifetime plus the net annual emissions generated by CalAm facilities of MPWSP Variant operation would total approximately 4,084 metric tons CO<sub>2</sub>e per year. The sum of GHG emissions generated by the GWR facilities of the MPWSP Variant (without the Monterey and Transfer Pipelines) construction activities amortized over the 30-year project lifetime plus the net emissions generated by operation of the GWR facilities would total approximately 1,844 metric tons CO<sub>2</sub>e per year. Therefore, the combined MPWSP Variant emissions would total approximately 5,928 metric tons CO<sub>2</sub>e per year. These emissions would exceed the 2,000 metric tons per year significance threshold; therefore, a significant impact would occur and the identified mitigation would be required. Although</p>	<p>None proposed.</p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.11 Greenhouse Gas Emissions (cont.)</b>				
Impact 4.11-1 (cont.)	emissions would be reduced to a less-than-significant level. Therefore, this impact is considered to be significant and unavoidable, even with implementation of mitigation.		implementation of the identified mitigation would reduce the overall carbon footprint of the Project Variant, the CPUC cannot substantiate that the mitigated GHG emissions would be reduced to a less-than-significant level. Therefore, this impact is considered to be significant and unavoidable, even with implementation of mitigation.	
Impact 4.11-2: Conflict with Executive Order S-3-05 and AB 32 Emissions Reduction Goals.	<p><b>SUM</b></p> <p>GHG emissions associated with the MPWSP would exceed the emissions significance threshold, which indicates that implementation of the project may not be consistent with the GHG emission reduction goals for year 2020 identified in Executive Order S-3-05 and AB 32. Therefore, it is concluded that the MPWSP would conflict with Executive Order S-3-05 and AB 32, and would result in a potentially significant impact.</p> <p>Implementation of the identified mitigation would ensure construction activities are conducted in a fuel-efficient manner and would reduce the overall carbon footprint of the project. Although implementation of the identified mitigation would reduce the overall carbon footprint of the project, the CPUC cannot substantiate that the mitigated GHG emissions would be reduced to a less-than-significant level. Therefore, this impact is considered to be significant and unavoidable, even with implementation of mitigation.</p>	<p><b>MM 4.11-1: GHG Emissions Reduction Plan.</b></p> <p><b>MM 4.18-1: Construction Equipment Efficiency Plan.</b></p>	<p><b>SUM</b></p> <p>Implementation of the MPWSP Variant CalAm facilities combined with the GWR facilities would result in the same potential conflicts with Executive Order S-3-05 and AB 32 as described for the MPWSP, which would be a significant impact. As under the MPWSP, this impact would not be reduced to a less-than-significant level with implementation of the identified mitigation measures. Therefore, this impact for the MPWSP Variant is considered to be significant and unavoidable, even with implementation of mitigation.</p>	None proposed.
Impact 4.11-3: Conflict with the AB 32 Climate Change Scoping Plan.	<p><b>SUM</b></p> <p>The MPWSP Desalination Plant designs include state of the art energy recovery and energy efficient features in place of standard energy saving systems; although there may be additional feasible energy reducing features available to further reduce the electrical consumption associated with the project. CARB has set a 20 percent electricity use reduction target for AB 32 Climate Change Scoping Plan Measure W-3; therefore, a 20 percent reduction in electricity use associated with the proposed project's energy recovery and energy saving features would indicate a less-than-significant impact associated with the proposed project's consistency with this measure. Although the identified mitigation would ensure that the proposed project is operated in an energy-efficient manner to the extent feasible, the CPUC cannot substantiate that the proposed project's electricity use would be reduced to a less-than-significant level. Therefore, this impact is considered to be significant and unavoidable, even with implementation of mitigation.</p>	<b>MM 4.11-1: GHG Emissions Reduction Plan.</b>	<p><b>SUM</b></p> <p>The GWR facilities would not conflict with the AB 32 Climate Change Scoping Plan. Same as for the proposed project, the identified mitigation would ensure that the CalAm facilities under the MPWSP Variant are operated in an energy-efficient manner to the extent feasible, but the CPUC cannot substantiate that the MPWSP Variant's electricity use would be reduced to a less-than-significant level. Therefore, this impact is considered to be significant and unavoidable, even with implementation of mitigation.</p>	None required.
<b>4.12 Noise and Vibration</b>				
Impact 4.12-1: Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	<p><b>SUM</b></p> <p>The operation of trucks, backhoes, bulldozers, excavators, front-end loaders, compactors, scrapers, and other heavy-duty construction equipment would generate high noise levels. Temporarily noise increases during project construction activities could result in substantial adverse effects on daytime and evening activities at nearby noise-sensitive receptors by exceeding speech and sleep interference thresholds. The potential for project construction activities to significantly affect daytime and evening activities at noise-sensitive receptors was determined based on the anticipated construction work hours for each project component, ambient noise levels at sensitive receptors, and the estimated noise levels generated by the loudest pieces of equipment expected to be used during project construction.</p> <p>Construction of the subsurface slant wells, MPWSP Desalination Plant, Source Water Pipeline, Salinas Valley Return Pipeline, and Brine Discharge Pipeline would result in less-than-significant daytime and nighttime noise impacts. Construction of the Transfer Pipeline, Terminal Reservoir, ASR Pump Station, ASR Conveyance Pipelines, ASR Pump-to-Waste Pipeline, Main System-Hidden Hills Interconnection Improvements, and Ryan Ranch-Bishop Interconnection Improvements would result in a less-than-significant impact related to temporary increases in daytime noise levels and no impact related to nighttime noise.</p>	<p><b>MM 4.12-1a: Neighborhood Notice</b></p> <p><b>MM 4.12-1b: General Noise Controls for Construction Equipment</b></p> <p><b>MM 4.12-1c: Noise Control Plan for Nighttime Pipeline Construction</b></p> <p><b>MM 4.12-1d: Additional Noise Controls for ASR-5 and ASR-6 Wells</b></p> <p><b>MM 4.12-1e: Offsite Accommodations for Substantially Affected Receptors.</b></p>	<p><b>SUM</b></p> <p>Like the MPWSP, nighttime noise impacts of the MPWSP Variant would remain significant and unavoidable even with implementation of mitigation. Nighttime construction would occur at additional locations associated with GWR facilities; however, because impacts at those locations could be mitigated to a less-than-significant level, they would not contribute to the overall significant and unavoidable impact of the MPWSP Variant.</p> <p><u>CalAm Facilities:</u></p> <p>Construction noise levels generated during construction of the CalAm facilities would be identical to those of the proposed project except that the duration of slant well drilling noise would be reduced because three fewer slant wells would be constructed. As under the MPWSP, with the exception of nighttime noise impacts associated with the Monterey Pipeline and ASR-5 and ASR-6 Wells, which would remain significant and unavoidable, implementation of the prescribed mitigation measures would reduce all other construction-related nighttime noise impacts to a less-than-significant level.</p>	<p><b>Mitigation Measure NV-1a: Drilling Contractor Noise Measures.</b></p> <p><b>Mitigation Measure NV-1c: Neighborhood Notice.</b></p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.12 Noise and Vibration</b>				
<b>Impact 4.12-1 (cont.)</b>	Significant impacts related to temporary increases in daytime noise levels would result during construction of the ASR-5 and ASR-6 Wells, ASR Settling Basin, and the Valley Greens Pump Station (both site options), but these impacts could be reduced to less than significant levels with implementation of the prescribed mitigation measures. Significant nighttime noise impacts would result during construction of the Desalinated Water Pipeline, Transmission Main, Monterey Pipeline, and the ASR-5 and ASR-6 Wells. With the exception of nighttime noise impacts associated with the Monterey Pipeline and ASR-5 and ASR-6 Wells, implementation of the prescribed mitigation measures would reduce all other construction-related nighttime noise impacts to a less-than-significant level. Nighttime noise impacts from the installation of the Monterey Pipeline and drilling and development of the ASR-5 and ASR-6 Wells would remain significant and unavoidable, even with implementation of mitigation.		<u>GWR Facilities:</u> Construction activities would result in temporary increases in noise that would not be substantial at GWR facilities construction sites, except for nighttime construction at the Injection Well Facilities site. Construction noise at all other GWR facilities sites would be less than significant because construction noise levels at the nearest sensitive receptors would be below the significance threshold for speech interference during the day (70 dBA Leq) or would result in exposure for less than two weeks.  For the Injection Well Facilities site, construction noise would not exceed daytime thresholds, but would exceed nighttime thresholds, resulting in a significant construction noise impact. Implementation of Mitigation Measure NV-1a would reduce nighttime construction noise levels to less than that 60 dBA Leq at the nearest residence, which would reduce the impact to a less-than-significant level.	
<b>Impact 4.12-2:</b> Expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during construction.	<b>LSM</b> No impact related to the generation of construction noise levels in excess of local construction noise level standards would result during construction of the Transfer Pipeline, Monterey Pipeline, ASR-5 and ASR-6 Wells, and ASR Settling Basin because there no established construction noise level standards that would apply to these facilities. Construction of the subsurface slant wells, Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, MPWSP Desalination Plant, Ryan Ranch-Bishop Interconnection Improvements, Main System-Hidden Hills Interconnection Improvements, and Valley Greens Pump Station would result in less-than-significant impacts with regard to the generation of construction noise levels in excess of local noise level standards.  Construction of the remaining project components (Desalinated Water Pipeline, Transmission Main, Terminal Reservoir/ASR Pump Station, ASR Conveyance Pipelines, and ASR Pump-to-Waste Pipeline) would generate noise levels in excess of local noise level standards. The Desalinated Water Pipeline and Transmission Main would exceed the City of Marina’s 60-dBA noise level standard for construction noise, a significant impact. In the absence of project-specific information regarding noise-reduction measures that would be implemented during project construction, it is conservatively assumed that noise resulting from construction of the Terminal Reservoir, ASR Pump Station, ASR Conveyance Pipelines, and ASR Pump-to-Waste Pipeline would violate Noise Policy B-9 of the Fort Ord Reuse Plan, a significant impact. Implementation of the prescribed mitigation measures would reduce these impacts to a less-than-significant level.	<b>MM 4.12-1b: General Noise Controls for Construction Equipment</b>  <b>MM 4.12-1c: Noise Control Plan for Nighttime Pipeline Construction</b>	<b>SUM</b> Same as for the proposed project, the exposure of people to or the generation of noise levels in excess of established standards would be less than significant with mitigation, except for impacts associated with the Tembladero Slough Diversion site, which could conflict with County Code Section 10.60.030, even with mitigation.  <u>CalAm Facilities:</u> Impacts related to the generation of construction noise levels in excess of local construction noise level standards would be the very similar to those of the proposed project except the duration of slant well drilling noise would be reduced because three fewer slant wells would be constructed. Same as the proposed project, all significant impacts would be reduced to a less-than-significant level with implementation of the prescribed mitigation measures.  <u>GWR Facilities:</u> Monterey County: Construction at the Reclamation Ditch, Tembladero Slough and Blanco Drain Diversion sites could conflict with County Code Section 10.60.030 as some construction equipment could result in noise levels at or above 85 dBA at 50 feet and construction would occur within 2,500 feet of residences within the unincorporated area of the county. Mitigation Measure NV-2a requires that construction equipment have properly operating mufflers and stationary noise equipment be located as far as possible from sensitive receptors, consistent with County General Plan Policy S-7.10. Implementation of this measure would reduce noise levels to below 85 dBA at 50 feet, except potentially for the Tembladero Slough Diversion site where impacts would remain significant and unavoidable.  City of Marina: Construction of segments of the RUWAP and Coastal Alignment Product Water Conveyance Pipelines and the RUWAP Booster Pump Station could violate Municipal Code Section 15.04.055 as construction activities could exceed 60 dBA for 25 percent of an hour and construction would occur after 7 PM. Mitigation Measure NV-2a would reduce construction noise and ensure compliance with City of Marina noise standards. Mitigation Measure NV-2b would limit evening construction times to those specified by the Marina City Code.	<b>Mitigation Measure NV-2a: Construction Equipment.</b>  <b>Mitigation Measure NV-2b: Construction Hours.</b>
<b>Impact 4.12-3:</b> Exposure of people to or generation of excessive groundborne vibration during construction.	<b>LSM</b> Construction of the subsurface slant wells, MPWSP Desalination Plant, ASR-5 and ASR-6 Wells, Ryan Ranch-Bishop Interconnection Improvements, Valley Greens Pump Station (both site options), and Main System-Hidden Hills Interconnection Improvements would result in less-than-significant vibration impacts with regard to both structural damage and human annoyance. There would be significant vibration impacts with regard to both structural damage and human annoyance from construction of the Desalinated Water Pipeline, Transmission Main, Transfer Pipeline, Monterey Pipeline, and Source Water	<b>MM 4.15-1a: Avoidance and Vibration Monitoring for Pipeline Installation in the Presidio of Monterey Historic District, Downtown Monterey, and the Lapis Sand Mining Plant Historic District</b>  <b>MM 4.12-3: Vibration Reduction Measures</b>	<b>LSM</b> The MPWSP Variant would have similar impacts to those of the MPWSP with respect to groundborne vibration.  <u>CalAm Facilities:</u> Vibration impacts related to structural damage and human annoyance would be very similar to those of the proposed project except that vibration impacts related to the subsurface slant wells would be slightly reduced because three fewer slant wells would be constructed. Same as the proposed project, all significant impacts would be reduced to a less-than-significant level with implementation of the prescribed mitigation measures.	None required.

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.12 Noise and Vibration (cont.)</b>				
<b>Impact 4.12-3 (cont.)</b>	Pipeline. Implementation of the prescribed mitigation measures would reduce these impacts to a less-than-significant level.		<u>GWR Facilities:</u> The GWR facilities would not result in excessive construction-related vibration at any of the sites, resulting in a less-than-significant impact, and no mitigation measures would be required.	
<b>Impact 4.12-4:</b> Consistency with the construction time limits established by the local jurisdictions.	<b>LSM</b> Several of the proposed project facilities could require nighttime construction. Construction of the subsurface slant wells and Source Water Pipeline would not be subject to the city of Marina’s construction time limits, which only apply to outdoor construction activities adjacent to residential land uses. Construction of the Desalinated Water Pipeline and Transmission Main would be potentially inconsistent with construction time limits because the City of Marina noise ordinance does not allow project construction to occur during nighttime hours. Because the proposed project would comply with the current noise ordinance, and would not result in nighttime construction, the impact would be less than significant with mitigation. The Monterey Pipeline and the ASR-5 and ASR-6 Wells would also require nighttime construction outside of the noise ordinance construction time limits but all nighttime work would be conducted only with prior approval from the local jurisdictions. The Cities of Seaside and Monterey grant variances to the time limits under certain circumstances. The impact would be less than significant for the Monterey Pipeline and the ASR-5 and ASR-6 Wells. The MPWSP Desalination Plant, Salinas Valley Return Pipeline, and Brine Discharge Pipeline could require nighttime construction but there are no local construction time limits that would apply to these facilities so no impact would result. None of the remaining facilities would require nighttime construction and it is anticipated that construction of the remaining facilities would be consistent with applicable construction time limits. No impact would result during construction of the remaining facilities.	<b>MM 4.12-1c: Noise Control Plan for Nighttime Pipeline Construction</b>	<b>LSM</b> The MPWSP Variant would have similar impacts to those of the MPWSP with respect to consistency with construction time limits. <u>CalAm Facilities:</u> Under the MPWSP Variant, all of the same CalAm facilities could require nighttime construction and would be potentially inconsistent with construction time limits established by local jurisdictions. Nighttime construction associated with the subsurface slant wells and MPWSP Desalination Plant could be slightly reduced as a result of the three fewer slant wells and the reduced capacity of the desalination plant. However, same as the proposed project, CalAm would obtain prior approval before conducting any construction activities outside the local construction time limits or would not engage in construction activities outside of the allowable time limits. Therefore, the impact would be less than significant. <u>GWR Facilities:</u> For the Injection Well Facilities site, nighttime construction and would be potentially inconsistent with construction time limits established by local jurisdictions. Implementation of Mitigation Measure NV-1a would include submitting a “Well Construction Noise Control Plan” to the Seaside Building Official to obtain authorization for nighttime work, which would reduce the impact to a less-than-significant level.	<b>Mitigation Measure NV-1a: Drilling Contractor Noise Measures.</b>
<b>Impact 4.12-5:</b> Substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the project during operations.	<b>LSM</b> Operation of the subsurface slant wells, MPWSP Desalination Plant, Terminal Reservoir, ASR Pump Station, Ryan Ranch-Bishop Interconnection Improvements, and Valley Greens Pump Station would result in less-than-significant noise impacts with regard to permanent operational noise increases. Significant noise impacts would result from operation of the ASR-5 and ASR-6 Wells and the booster stations that would be upgraded by the Main System-Hidden Hills Interconnection Improvements; however, implementation of the prescribed MM would reduce all significant operational noise impacts to a less-than-significant level. No impact would result from operation of the proposed pipelines because the pipelines would not involve the installation of stationary noise sources.	<b>MM 4.12-5: Stationary Source Noise Controls</b>	<b>LSM</b> The MPWSP Variant would have similar impacts to those of the MPWSP with respect to ambient noise levels during operation. <u>CalAm Facilities:</u> Operational noise level increases associated with the CalAm facilities under the MPWSP Variant would be similar to those of the proposed project except that operational noise levels associated with the subsurface slant wells and MPWSP Desalination Plant could be slightly reduced as a result of the three fewer slant wells and the reduced capacity of the desalination plant. <u>GWR Facilities:</u> Operation at the Salinas Pump Station Source Water Diversion and the Product Water Conveyance Pipelines would not result in operational noise impacts as no new permanent noise-generating equipment is proposed at these locations. Operation at the remaining sites would generate operational noise levels at less-than-significant levels, and no mitigation measures are required.	None required.
<b>4.13 Public Services and Utilities</b>				
<b>Impact 4.13-1:</b> Disrupt or relocate regional or local utilities during construction.	<b>LSM</b> Project construction activities have the potential to disrupt or relocate regional or local utilities. This impact would be potentially significant for all project components but would be reduced to a less-than-significant level with implementation of identified mitigation measures.	<b>MM 4.13-1a: Locate and Confirm Utility Lines</b> <b>MM 4.13-1b: Coordinate Final Construction Plans with Affected Utilities</b> <b>MM 4.13-1c: Safeguard Employees from Potential Accidents Related to Underground Utilities</b> <b>MM 4.13-1d: Emergency Response Plan</b>	<b>LSM</b> The MPWSP Variant would have similar impacts to those of the MPWSP with respect to disruption or relocation of utilities. <u>CalAm Facilities:</u> The potential for construction of the CalAm facilities under the MPWSP Variant to disrupt or relocate utilities would be similar to that of the proposed project. Although the project variant would construct three fewer slant wells than the proposed project, because the orientation of the slant well clusters under the project variant would be very similar to the slant well clusters under the proposed project, the three slant well clusters containing the seven slant wells would have the	The mitigation strategies embodied in the mitigation measures applied to the CalAm Facilities would be expected to be employed for the GWR facilities



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.13 Public Services and Utilities (cont.)</b>				
Impact 4.13-1 (cont.)		<p><b>MM 4.13-1e: Notify Local Fire Departments</b></p> <p><b>MM 4.13-1f: Ensure Prompt Reconnection of Utilities</b></p>	<p>same potential to conflict with underground utilities (namely, the MRWPCA outfall). If the Salinas Valley return flows are injected via new injection wells at the CEMEX active mining area, then a 2.2-mile-long pipeline extending between the MPWSP Desalination Plant and the CEMEX site would be constructed. The 2.2-mile-long pipeline would be aligned parallel to the proposed Source Water Pipeline; thus, the potential for conflicts with other underground utilities would be similar to the Source Water Pipeline. Like the proposed project, the potential for the CalAm facilities under the MPWSP Variant to conflict with underground utilities is considered a significant impact. However, implementation of the prescribed mitigation measures would reduce the impact to a less-than-significant level.</p> <p><u>GWR Facilities:</u></p> <p>The GWR facilities, in particular the pipelines proposed as part of the GWR facilities, would have a similar potential to disrupt or relocate utilities to that of the CalAm facilities.</p>	
<p><b>Impact 4.13-2:</b> Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during construction.</p>	<p><b>LSM</b></p> <p>Even under the worst-case scenario that assumes all of the proposed project's excess spoils and construction debris would be disposed of at the Monterey Peninsula Landfill, the total amount of excess spoils and construction debris generated by the project would be well below the landfill's permitted daily acceptance rate and represents approximately 0.07 percent of the landfill's remaining capacity. Therefore, the amount of waste generated during project construction would not exceed or substantially deplete the landfill capacity. However, failing to divert a substantial portion of the waste generated during project construction from the landfill could conflict with state (i.e., to reduce, reuse, or compost at least 50 percent of waste) and county diversion goals and policies (i.e., to recycle and/or salvage at least 50 percent of nonhazardous construction and demolition waste and reuse and/or recycle 100 percent of trees, stumps, rocks, and vegetation) and could adversely affect the jurisdictions' waste diversion rates.</p> <p>Potential conflicts with state and county diversion goals would be a significant impact, but the impact would be mitigated to a less than significant level with implementation of the identified mitigation measure.</p>	<p><b>MM 4.13-2: Construction Waste Reduction and Recycling Plan</b></p>	<p><b>LSM</b></p> <p>If the Salinas Valley return flows are injected via new injection wells at the CEMEX active mining area and the 2.2-mile-long pipeline extending between the MPWSP Desalination Plant and the CEMEX Sand Mining Facility is constructed, the total volume of excess spoils generated by the MPWSP Variant is estimated to be 56,805 cubic yards. If the Salinas Valley return flows are injected via new injection wells at the MPWSP Desalination Plant site, then the total volume of excess spoils generated by the MPWSP Variant is estimated to be 56,305 cubic yards. Under both scenarios, the total volume of excess spoils generated during construction of the CalAm facilities and GWR facilities represent approximately 0.12 percent of the landfill's remaining capacity. Therefore, the amount of waste generated during construction would not substantially deplete the landfill capacity. Based on the assumption that excess spoils and construction debris would be hauled to the landfill Monday through Friday, with spoils generated during construction of GWR facilities spread out over an 18-month period, and spoils generated during construction of the CalAm facilities spread out over a 30-month period, if construction of the CalAm facilities were to overlap with construction of the GWR facilities, approximately 120 cubic yards (or 180 tons) of excess spoils could be hauled to the landfill for disposal each day. This daily disposal rate would still be well within the landfill's average daily acceptance rate (1,000 tons) and permitted daily acceptance rate (3,500 tons). However, as for the proposed project, failure to divert a portion of the waste generated during project construction from the landfill could conflict with state and county diversion goals and policies. This would be a significant impact but implementation of the identified mitigation measure would reduce the impact to less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>As described in <b>Table 3-4</b> and Section 3.5.1 of Chapter 3, Project Description, drilling spoils generated during slant well construction would be spread within the construction disturbance area and are not expected to require offsite disposal. Therefore, the reduction in the total number of slant wells that would be constructed under the MPWSP Variant would not affect the volume of excess spoils generated during construction. Because the reduced capacity 6.4-mgd MPWSP Desalination Plant under the MPWSP Variant would have the same footprint as the 9.6-mgd MPWSP Desalination Plant under the proposed project and no excess spoils requiring offsite disposal would be generated during construction of the desalination plant, the reduction in desalination capacity would also have no effect on excess spoils. Although the MPWSP Variant would not include construction of the 1.2-mile Salinas Valley Return Pipeline, if the Salinas Valley return flows are injected via new injection wells at the CEMEX Sand Mining Facility, then an additional 2.2-mile-long pipeline extending between the MPWSP Desalination Plant and the CEMEX site would be constructed, resulting in roughly 500 cubic yards of excess spoils requiring offsite disposal. If the Salinas Valley return flows are injected via new injection wells at the Charles Benson Road site, no additional excess spoils requiring offsite disposal are anticipated.</p>	<p><b>MM PS-3: Construction Waste Reduction and Recycling Plan</b></p>



**TABLE ES-4 (Continued)**  
**COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.13 Public Services and Utilities (cont.)</b>				
<b>Impact 4.13-2 (cont.)</b>			<p>Even with an additional 500 cubic yards of excess spoils, the total volume in excess spoils generated by the CalAm facilities of the MPWSP Variant would be similar to those of the proposed project. The excess spoils would be within the landfill's permitted daily acceptance rate and would not exceed or substantially deplete the landfill capacity. However, as for the proposed project, failure to divert a portion of the waste generated during project construction from the landfill could conflict with state and county diversion goals and policies. This would be a significant impact but implementation of the identified mitigation measure would reduce the impact to less than significant.</p> <p><u>GWR Facilities:</u>                      Construction of the GWR facilities would generate a total of 21,080 cubic yards of excess spoils. Spread out over the 18-month construction period for the GWR facilities, this equates to roughly 60 cubic yards (90 tons) of excess spoils requiring offsite disposal each day Monday through Friday of each week. Construction-generated solid waste disposal at a landfill may be out of compliance with State and local waste diversion policies and goals, resulting in a significant impact. Implementation of Mitigation Measure PS-3 would reduce the potentially significant solid waste impact to a less-than-significant level.</p>	
<p><b>Impact 4.13-3:</b> Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during operations.</p>	<p><b>LS</b>                      MPWSP Desalination Plant operations would generate residual solid waste, for which there are no known opportunities for reuse or recycling, that would be disposed of at the Monterey Peninsula Landfill. Operation of the ASR Pump-to-Waste System would generate sediment materials that would be taken to the Waste Management District's materials recovery facility for reuse or recycling; operation of the ASR Pump-to-Waste System would have no effect on landfill capacity and solid waste disposal. All other proposed facilities would have very limited potential to generate waste during operations or maintenance. The total solid waste generated by the proposed project, which would be generated during MPWSP Desalination Plant operations, represents approximately 0.88 percent of the average daily volume of waste received and 0.25 percent of the total permitted daily acceptance rate. The landfill could accept the waste without exceeding its permitted daily tonnage or substantially depleting long-term capacity. Therefore, impacts related to solid waste disposal and landfill capacity during operations and maintenance would be less than significant.</p>	<p>None Required.</p>	<p><b>LS</b>                      The MPWSP Variant would have similar impacts to those of the MPWSP with respect to solid waste during operation. Although the reduced capacity of the CalAm facilities would result in reduced solid waste disposal needs, the GWR facilities would have additional solid waste disposal needs and would dispose of waste at the same landfill as the CalAm facilities, resulting in an overall similar impact.</p> <p><u>CalAm Facilities:</u>                      The potential for operation of the CalAm facilities to adversely impact landfill capacity would be somewhat less than that of the proposed project. While the same components would be involved in operation of the CalAm facilities, because the MPWSP Desalination plant would be somewhat smaller (involving four active reverse osmosis modules compared to the proposed project's six), a reduced amount of residual solids requiring landfill disposal would be produced. As under the project, the impact of waste produced during operation of the CalAm facilities on the landfill's daily tonnage limit and long-term capacity would be less than significant. Because there would be less desalination plant product water to convey to the ASR system, there would be slightly less sediment produced from maintenance of the ASR wells associated with the desalination plant. As under the project, the sediment would be taken to the Waste Management District's materials recovery facility for reuse or recycling. The potential impact of the other CalAm facilities related to landfill capacity and compliance with applicable solid waste laws and regulations during operations would be the same as that of the proposed project.</p> <p><u>GWR Facilities:</u>                      The Treatment Facilities at the Regional Treatment Plant would generate some additional solid waste that would be routinely disposed at the Monterey Peninsula Landfill in addition to solids generated from the existing wastewater treatment facilities. The landfill could accept the waste without exceeding its permitted daily tonnage or substantially depleting long-term capacity. All other proposed facilities would have a very limited potential to generate waste during operations or maintenance. Impacts related to solid waste disposal and landfill capacity during operations and maintenance would be less-than-significant, and no mitigation measures are required.</p>	<p>None Required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.13 Public Services and Utilities (cont.)</b>				
<p><b>Impact 4.13-4:</b> Result in effects from construction of new wastewater treatment or conveyance facilities or the expansion of existing facilities, exceed wastewater treatment requirements of the Central Coast RWQCB, or result in a determination by the wastewater treatment provider that it has inadequate treatment or outfall capacity to serve the project</p>	<p><b>LSM</b> As described in Impact 4.3-4 in Section 4.3, Surface Water Hydrology and Water Quality, both the “brine only” discharges and the combined discharges would comply with Ocean Plan water quality objectives for all assessed constituents except PCBs and ammonia. <b>Mitigation Measure 4.3-4</b> would reduce the water quality impact associated with exceedances of the Ocean Plan water quality objective for PCBs and ammonia to a less-than-significant level by providing a menu of design features and operational protocols to be employed, individually or in combination, to reduce the concentration of PCBs to below the Ocean Plan water quality objectives at the edge of the Zone of Initial Dilution (ZID). The effects of construction associated with new wastewater treatment facilities that may be required to avoid exceedances of Ocean Plan constituents are described in Section 4.3, following the description of the mitigation measure in Impact 4.3-4.</p> <p>Given the small number of CalAm employees that would be staffed at the MPWSP Desalination Plant (25 to 30 employees), the volume of wastewater generated at this facility would be de minimus. None of the other proposed project facilities would generate wastewater during operations that would require treatment at the MRWPCA Regional Wastewater Treatment Plant. Maximum instantaneous flows measured in the outfall between 1998 and 2012 (MRWPCA, 2013b) ranged from 40.4 mgd to 59.9 mgd indicating that even during peak storm events, there would be sufficient capacity in the outfall to accept the brine generated by the MPWSP Desalination Plant year-round. The operations of the proposed project would not result in inadequate capacity at the existing wastewater treatment plant or the existing outfall and the impact would be less than significant.</p>	<p><b>MM 4.3-4 (Implement Measures to Avoid Exceedances over Water Quality Objectives at the Edge of the ZID)</b></p>	<p><b>LSM</b> Similar to the proposed project, the “brine only” discharges and the discharges combined with treated wastewater would comply with Ocean Plan water quality objectives for all assessed constituents except PCBs and ammonia. Discharges associated with brine, treated wastewater and GWR-effluent would also exceed Ocean Plan water quality objectives for chlordane, toxaphene, DDT and TCDD Equivalents. <b>Mitigation Measure 4.3-4</b> would reduce the water quality impact associated with exceedances of the Ocean Plan water quality objectives to a less-than-significant. The effects of construction associated with new wastewater treatment facilities that may be required to avoid exceedances of Ocean Plan constituents are described in Section 4.3, following the description of the mitigation measure in Impact 4.3-4. The operations of the project variant would not result in inadequate capacity at the existing wastewater treatment plant or the existing outfall and the impact would be less than significant.</p> <p><u>CalAm Facilities:</u> Wastewater generated during operation of the CalAm facilities would be similar to the proposed project. Given the small number of CalAm employees that would be staffed at the MPWSP Variant Desalination Plant, the volume of wastewater generated at this facility would be de minimus.</p> <p><u>GWR Facilities:</u> Operation of GWR facilities would result in a minimal increased wastewater treatment demand due to employment of nine new permanent workers and the GWR facilities. Operations could be served by the existing capacity at the Regional Treatment Plant, taking into account MRWPCA’s service commitments, resulting in a less-than-significant impact on wastewater treatment services. No mitigation measures are required.</p>	<p>None required.</p>
<p><b>Impact 4.13-5:</b> Increased corrosion of the MRWPCA outfall and diffuser as a result brine discharge associated with project operations.</p>	<p><b>LSM</b> The salinity content of the MPWSP brine stream that would be discharged through the MRWPCA outfall has the potential to increase scaling and corrosion of the outfall and diffuser, a potentially significant impact. Implementation of the identified MM would reduce the impact to less than significant.</p>	<p><b>MM 4.13-5: Routine Inspections and As-Needed Repairs to MRWPCA Outfall and Diffuser</b></p>	<p><b>LSM</b> <u>CalAm Facilities:</u> The impact of scaling and corrosion on the MPWPCA’s outfall from the brine discharge the desalination plant under the MPWSP Variant would be similar to and slightly less than that of the proposed project since less brine would be generated by the smaller plant. As under the project the impact would be less than significant</p> <p><u>GWR Facilities:</u> Not applicable to the GWR facilities since the effluent would not cause corrosion of the outfall pipeline.</p>	<p>None required.</p>
<b>4.14 Aesthetic Resources</b>				
<p><b>Impact 4.14-1:</b> Construction-related impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.</p>	<p><b>LS</b> Construction equipment and machinery, spoils stockpiles, vegetation removal, and exposed earth associated with the implementation of many project components would be temporarily visible to motorists, bicyclists, pedestrians, and other observers such as nearby residents and could disrupt the visual character of the surrounding areas. Some of these construction activities would be visible from Highways 1 and 68, which are eligible for designation and officially designated as State Scenic Highways, respectively. Due to the temporary nature of these impacts, and because construction work areas would be restored after construction, construction-related impacts to scenic resources would be less than significant. Although mitigation is not required, this EIR recommends implementation of Improvement Measure 4.14-1 (Maintain Clean and Orderly Construction Sites).</p>	<p><b>Improvement Measure 4.14-1: Maintain Clean and Orderly Construction Sites</b></p>	<p><b>LS</b> Under the Project Variant, construction would take place at the same locations as the proposed project, and construction also would occur at the locations of the GWR Facilities. No substantial effect on scenic resources or the visual character of the site and its surroundings would occur at any of the sites, and the overall impact would be less than significant.</p> <p><u>CalAm Facilities:</u> Impacts on scenic resources or the visual character of the project area and its surroundings during construction of the CalAm-owned facilities would be the same as the proposed project with one minor exception: because up to three fewer slant wells (seven vs. ten under the proposed project) would be constructed, the total ground disturbance along the coast (specifically, in the CEMEX active mining area) would decrease by approximately 3 acres (6 acres vs. 9 acres under the proposed project).</p>	<p>None Required</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.14 Aesthetic Resources (cont.)</b>				
<b>Impact 4.14-1 (cont.)</b>			<p><u>GWR Facilities:</u></p> <p>The GWR Facilities construction would result in less than significant impacts to scenic views or scenic resources. Construction activities would be temporarily visible from multiple public vantage points to varying degrees at all construction sites, except for the Salinas Treatment Facility Storage and Recovery, the Blanco Drain Diversion, and the Regional Treatment Plant sites as these sites are not visible from any public viewpoints. Construction at GWR Facilities sites would include equipment and machinery, spoils stockpiles, vegetation removal, and exposed earth. Although some areas would be intermittently visible to motorists, bicyclists, pedestrians, and other observers such as nearby residents, these construction activities would be temporary and would not significantly change or disrupt the visual character of the surrounding areas, and therefore, construction-related impacts related to degradation of the visual character of surrounding areas would be less than significant. No mitigation measures are required.</p>	
<b>Impact 4.14-2:</b> Temporary sources of substantial light or glare during construction.	<p><b>LSM</b></p> <p>Nighttime construction activities would require temporary construction lighting, which could introduce substantial, albeit temporary, light or glare into the project area. Due to the proximity to roadways and/or residential receptors this impact would be significant for the subsurface slant wells, Source Water Pipeline, the Brine Discharge Pipeline, Desalinated Water Pipeline, Transmission Main, Monterey Pipeline, Salinas Valley Return Pipeline, and the ASR-5 and ASR-6 Wells. However, the impact would be reduced to a less-than-significant level with implementation of the identified mitigation measure. The other proposed facilities are expected to be constructed in daytime hours and therefore would have no impacts from construction-related light and glare.</p>	<p><b>MM 4.14-2: Site-Specific Construction Lighting Measures</b></p>	<p><b>LSM</b></p> <p>The Project Variant would have the same potential to result in significant impacts from construction-related light and glare as the proposed project, albeit in additional locations associated with the GWR Project Facilities. The proposed project mitigation measure, and the similar measure that has been developed for the GWR Project Facilities, would reduce the impact to a less than significant level.</p> <p><u>CalAm Facilities:</u></p> <p>The temporary impact from construction-related sources of substantial light and glare during construction of the CalAm-owned facilities would be the same as the proposed project with one minor exception: because up to three fewer slant wells would be constructed, the intensity and/or overall duration of light and glare impacts associated with construction of the subsurface slant wells could be lower.</p> <p><u>GWR Facilities:</u></p> <p>For GWR Facilities sites where nighttime construction could occur, nighttime lighting would result in less-than-significant impacts at the Salinas Pump Station Diversion, the Lake El Estero Diversion, and the Regional Treatment Plant sites. Nighttime lighting could result in potentially significant light impacts at the Injection Wells Facilities site. However, with implementation of <b>Mitigation Measure AE-2 (Minimize Nighttime Lighting)</b>, this impact would be reduced to a less-than-significant level.</p>	<p><b>Mitigation Measure AE-2: Minimize Construction Nighttime Lighting</b></p>
<b>Impact 4.14-3:</b> Permanent impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	<p><b>LSM</b></p> <p>The two 3-million-gallon tanks at the Terminal Reservoir/ASR Pump Station site could have an adverse impact on scenic resources and the existing visual character of the project area in the vicinity of an undeveloped area of the former Fort Ord Military Base on the east side of General Jim Moore Boulevard. This impact would be significant but would be reduced to a less-than-significant level with implementation of the identified mitigation measures.</p> <p>The scale and appearance of the proposed MPWSP Desalination Plant facilities would be consistent with the character of the existing industrial facilities at the adjacent Monterey Regional Environmental Park and MRWPCA Regional Wastewater Treatment Plant. The pump houses for the ASR-5 and ASR-6 Wells would be visible from General Jim Moore Boulevard and nearby residences; however, these aboveground facilities would be small relative to existing structures and buildings in the area and would not block any views of scenic resources. The Valley Greens Pump Station would be comparable in scale with surrounding development. For these reasons, the impact would be less than significant for the MPWSP Desalination Plant, ASR-5 and ASR-6 Wells, and Valley Greens Pump Station.</p>	<p><b>MM 4.14-3a: Facility Design</b></p> <p><b>MM 4.14-3b: Facility Screening</b></p>	<p><b>LSM</b></p> <p>The Project Variant would have the same permanent impacts on scenic resources or the visual character of the project area as the proposed project. The GWR Facilities would not add any significant permanent effects on scenic resources or the visual character of the project area.</p> <p><u>CalAm Facilities:</u></p> <p>Permanent impacts on scenic resources or the visual character of the project area for the CalAm-owned facilities would be identical to those under the proposed project.</p> <p><u>GWR Facilities:</u></p> <p>Upon completion of construction, the proposed pipeline components of the GWR Facilities would not be visible, and structural aboveground development at the other GWR Facilities sites would not have a significant adverse effect on scenic resources or substantially degrade the visual character or quality of the surrounding area, resulting in a less-than-significant impact. No mitigation measures are required to reduce this impact; however, site design measures for GWR facilities are included as mitigation measures to ensure they are implemented appropriately, in accordance with the City of Seaside’s concerns about the aesthetic quality of the proposed facilities for future land uses that are planned in Seaside.</p>	<p><b>Mitigation Measure AE-3: Provide Aesthetic Screening for New Above-Ground Structures.</b></p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.14 Aesthetic Resources (cont.)</b>				
<b>Impact 4.14-3 (cont.)</b>	The subsurface slant wells would be buried below the beach surface and would not be visible after construction. The electrical control panel and electrical control building for these wells would be aboveground but would not be visible from offsite locations. Therefore, the impact would be less than significant.  All other project facilities would be constructed underground and would not be visible after construction. No impact would result.			
<b>Impact 4.14-4:</b> Permanent new sources of light or glare.	<b>LSM</b> Lighting proposed at the MPWSP Desalination Plant site would be similar to existing light sources in the vicinity and would not be out of character with lighting at the adjacent Monterey Regional Environmental Park and MRWPCA Regional Wastewater Treatment Plant. Security lighting at the proposed Terminal Reservoir and ASR Pump Station site would be visible at a distance from General Jim Moore Boulevard but there are no roads or residences in the immediate vicinity of the site that would be adversely affected by this lighting. The impact associated with permanent new sources of light and glare from implementation of the MPWSP Desalination Plant, Terminal Reservoir, and ASR Pump Station would be less than significant. Light and glare impacts from new nighttime lighting at the proposed ASR-5 and ASR-6 Wells and Valley Greens Pump Station (Option 1) would be a significant impact as these facilities would be located in close proximity to residences and roadways and in areas with limited nighttime lighting. Implementation of the identified MM would reduce the impact to a less-than-significant level.	<b>MM 4.14-4: Outdoor and Security Lighting</b>	<b>LSM</b> The MPWSP Variant would include additional sites where nighttime lighting would be needed compared to the MPWSP; however, the significance of the overall impact would not change.  <u>CalAm Facilities:</u> The impact related to permanent new sources of light and glare associated with the CalAm-owned facilities would be identical as that of the proposed project.  <u>GWR Facilities:</u> Upon completion of construction, the proposed pipeline components of the GWR facilities would be underground, and many other facilities would not have exterior permanent lighting. The only GWR facilities that would result in development of new structures/facilities with exterior lighting are: the Treatment Facilities at the Regional Treatment Plant; the Product Water Conveyance Booster Pump Station (either RUWAP or Coastal option), and the Injection Well Facilities. Permanent exterior lighting for the Treatment Facilities at the Regional Treatment Plant would not result in a substantial new source of offsite lighting or glare. Impacts due to operational nighttime lighting at these facilities would be less than significant. The Booster Pump Stations (both options) and the Injection Well Facilities may create a new source of light or glare that could adversely affect nighttime views in the area and the impact would be considered significant. Implementation of <b>Mitigation Measure AE-4 (Exterior Lighting Minimization)</b> would reduce the impact to a less-than-significant level.	<b>Mitigation Measure AE-4: Exterior Lighting Minimization.</b>
<b>4.15 Cultural and Paleontological Resources</b>				
<b>Impact 4.15-1:</b> Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5 during construction.	<b>LSM</b> Installation of the Monterey Pipeline and Source Water Pipeline could result in direct (i.e., historic resources exist within the estimated construction disturbance area) and indirect (i.e., from construction-related vibration) impacts to contributing elements to the Presidio of Monterey Historic District and Lapis Sand Mining Plant Historic District, respectively. In addition, installation of the Monterey Pipeline could result in indirect impacts to other historical resources located along W. Franklin Street in downtown Monterey. Any physical alteration and/or inadvertent damage to these historical resources would result in a significant impact. However, the impact would be reduced to a less-than-significant level with implementation of the prescribed mitigation measures.  No impact would result from implementation of all other proposed project facilities because there are no historical resources within the respective direct and indirect APEs.	<b>MM 4.15-1a: Avoidance and Vibration Monitoring for Pipeline Installation in the Presidio of Monterey Historic District, Downtown Monterey, and the Lapis Sand Mining Plant Historic District</b>  <b>MM 4.15-1b: Special Construction Techniques to Preserve Lapis Siding</b>	<b>LSM</b> Under the MPSWP Variant, impacts to historic resources would be identical as those of the proposed project. The GWR facilities would not add impacts to historic resources. The combined impact would be mitigated to a less-than-significant level.  <u>CalAm Facilities:</u> Impacts to historic resources associated with construction of the CalAm facilities would be identical to those of the proposed project because the Monterey Pipeline and Source Water Pipeline are included in the MPWSP Variant. As under the MPWSP, implementation of the identified mitigation measures would reduce this impact to a less-than-significant level.  <u>GWR Facilities:</u> There are no potential historic resources within the APE of the GWR facilities and construction of the GWR facilities would not have an effect on known historic resources.	None Required
<b>Impact 4.15-2:</b> Cause a substantial adverse change in the significance of an archeological resource pursuant to Section 15064.5 of the CEQA Guidelines during construction.	<b>LSM</b> Impacts to archaeological resources could occur during installation of the proposed Monterey Pipeline in downtown Monterey along W. Franklin Street between High Street and Figueroa Street, and within 100 feet of Presidio #2 in the Presidio of Monterey. Installation of the Source Water Pipeline within 100 feet of buildings and structures that are contributing elements of the Lapis Sand Mining Plant Historic District could also result in impacts to archaeological resources. In addition, excavation activities associated with the	<b>MM 4.15-2a: Establish Archaeologically Sensitive Areas</b>  <b>MM 4.15-2b: Inadvertent Discovery of Cultural Resources</b>	<b>LSM</b> The MPSWP Variant would have a similar potential to affect unknown archeological resources as the proposed project. While fewer CalAm facilities would be constructed, the addition of GWR facilities would result in an overall increase in the amount of land that would be disturbed, and therefore would increase the potential to affect unknown archaeological resources. The combined impact would be mitigated to a less-than-significant level.	<b>MM CR-2b: Discovery of Archaeological Resources or Human Remains</b>



**TABLE ES-4 (Continued)  
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<b>4.15 Cultural and Paleontological Resources (cont.)</b>				
<b>Impact 4.15-2 (cont.)</b>	<p>Monterey Pipeline and Valley Greens Pump Station (both site options) occurring within Archaeologically Sensitive Areas could result in a significant impact to archaeological resources. However, these impacts would be reduced to a less-than-significant level with implementation of the identified mitigation measures.</p> <p>In addition, the possibility of uncovering unknown archaeological resources in the direct APEs of all other proposed project components cannot be entirely discounted. Inadvertent discovery of archaeological resources would be a significant impact but would be reduced to a less-than-significant level with implementation of the identified mitigation measure.</p>		<p><u>CalAm Facilities:</u></p> <p>Construction of the CalAm facilities would result in the same impacts to known and unknown prehistoric and historic-era archaeological resources as the proposed project because the Source Water Pipeline, Monterey Pipeline, and Valley Greens Pump Station are included in the MPWSP Variant. The impact related to the inadvertent discovery of unknown archaeological resources during construction of the other CalAm facilities components would be slightly reduced when compared to the proposed project due to the reduced disturbance area associated with construction of seven subsurface slant wells (versus the ten slant wells under the proposed project). Like the proposed project, the potential to adversely affect archaeological resources is considered a significant impact. However, the impact would be reduced to a less-than-significant level with implementation of the identified mitigation measures.</p> <p><u>GWR Facilities:</u></p> <p>The GWR facilities are entirely outside of known prehistoric and historic-era archaeological resources sites. Construction of the GWR facilities could result in potentially significant impacts to unknown archaeological resources and/or human remains that may be uncovered during construction at any of the GWR facilities of the MPWSP Variant sites, particularly in the vicinity of Lake El Estero Diversion. This is considered potentially significant impacts. Implementation of <b>Mitigation Measure CR-2b (Discovery of Archeological Resources or Human Remains)</b> would reduce the impact to a less-than-significant level.</p>	
<b>Impact 4.15-3:</b> Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature during construction.	<p><b>LS</b></p> <p>Construction of the proposed project components would require excavation through three geologic units that have the potential to contain paleontological resources, particularly vertebrate fossils. Of these three geologic units, only the Monterey Formation is known to contain vertebrate fossils that would qualify as a unique paleontological resource. However, because construction would occur in a limited area of the Monterey Formation and within previously-disturbed rights-of way of existing roads, potential impacts to unique paleontological resources would be less than significant.</p>	None required.	<p><b>LS</b></p> <p>The MPWSP Variant would result in less-than-significant impacts to paleontological resources. Neither the CalAm facilities nor the GWR facilities would be located in areas with a high potential to yield significant paleontological resources.</p> <p><u>CalAm Facilities:</u></p> <p>The potential impact of construction of the CalAm facilities on significant paleontological resources would be the same as under the proposed project because the MPWSP variant would involve construction of the same components and to the same extent in the Monterey Formation. The impact of the MPWSP Variant on paleontological resources would, like the project, be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>GWR facilities would be constructed within a limited extent of the Monterey Formation within previously-disturbed rights-of-way. As such, much of the surficial and shallow materials that the GWR facilities of the MPWSP Variant would be placed on or within are fill materials or previously-disturbed native materials that have a low paleontological potential. In addition, the diatoms and benthic foraminifera that comprise much of the formation are not considered a significant paleontological resource. Thus, the construction of the GWR facilities would result in a less than significant impact to paleontological resources, and no mitigation measures are required.</p>	None required.
<b>Impact 4.15-4:</b> Disturbance of any human remains, including those interred outside of formal cemeteries, during construction.	<p><b>LSM</b></p> <p>While no known human remains have been documented within the MPWSP direct APE, the possibility of inadvertently uncovering human remains cannot be entirely discounted. The potential inadvertent discovery of human remains is considered a significant impact. However, the impact would be reduced to a less-than-significant level with implementation of the prescribed mitigation measure.</p>	<b>MM 4.15-4: Inadvertent Discovery of Human Remains</b>	<p><b>LSM</b></p> <p>The MPWSP Variant would have a similar potential to affect unknown human remains as the proposed project. While fewer CalAm facilities would be constructed, the addition of GWR facilities would result in an overall increase in the amount of land that would be disturbed, and therefore would increase the potential to affect unknown human remains. The combined impact would be mitigated to a less-than-significant level.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for excavation of CalAm facilities under the MPWSP Variant to disturb human remains would be the same as under the proposed project because excavation would occur in the same areas and to the same extent as the proposed project (except that three fewer slant wells</p>	<p><b>MM CR-2b: Discovery of Archaeological Resources or Human Remains</b></p> <p><b>Mitigation Measure CR-2c: Native American Notification.</b></p>

TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT

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<b>4.15 Cultural and Paleontological Resources (cont.)</b>				
Impact 4.15-4 (cont.)			<p>would be excavated). As under the MPWSP, this significant impact would be reduced to a less-than-significant impact with implementation of the identified mitigation measure.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities could result in potentially significant impacts to unknown human remains that may be uncovered during construction at any of the GWR facilities of the MPWSP Variant sites. This is considered potentially significant impacts. Implementation of <b>Mitigation Measures CR-2b (Discovery of Archeological Resources or Human Remains) and CR-2c (Native American Notification)</b> would reduce the impact to a less-than-significant level.</p>	
<b>4.16 Agriculture and Forestry Resources</b>				
<p><b>Impact 4.16-1:</b> Permanently or temporarily convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.</p>	<p><b>LSM</b></p> <p>None of the other proposed project facilities would result in the permanent conversion of agricultural land to non-agricultural uses. However, the Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, and Desalinated Water Pipeline alignments are located within or adjacent to lands designated as Prime Farmland or Farmland of Statewide Importance and the installation of these pipelines could temporarily disrupt agricultural land uses as a result of trenching and excavations, construction staging, and construction vehicle access. Temporary disruption of agricultural uses is considered a significant impact but would be reduced to a less-than-significant level with implementation of the identified mitigation measure. Agricultural production on land used for the cultivation of row crops could resume after construction has been completed. None of the other proposed project facilities are anticipated to result in temporary disruption of agricultural uses.</p>	<p><b>MM 4.16-1: Minimize Disturbance to Farmland</b></p>	<p><b>LSM</b></p> <p>Temporary effects on agricultural uses in designated important farmland would be similar under the MPWSP Variant as under the proposed project. The GWR facilities would add some additional locations where temporary effects on agricultural uses would occur. However, the combined impact would be mitigated to a less-than-significant level.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm facilities under the MPWSP Variant to result in the conversion of farmland to non-agricultural use would be identical to the proposed project because the Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, and Desalinated Water Pipeline alignments would be the same. Like the proposed project, with implementation of the prescribed mitigation, the impact would be reduced to a less-than-significant level.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the Salinas Treatment Facility (specifically, slip-lining of the existing 33-inch industrial wastewater pipeline) and a portion of the Blanco Drain Diversion pipeline could temporarily disrupt agricultural uses in designated important farmland areas, a potentially significant impact. However, implementation of <b>Mitigation Measure LU-1 (Minimize Disturbance to Farmland)</b> would reduce the impact to a less-than-significant level.</p>	<p><b>MM LU-1: Minimize Disturbance to Farmland</b></p>
<p><b>Impact 4.16-2:</b> Conflicts with existing zoning for agricultural uses or with Williamson Act contracts.</p>	<p><b>LSM</b></p> <p>Construction of the Source Water Pipeline and the Desalinated Water Pipeline could result in temporary conflicts with Williamson Act contracts. Construction of the Brine Discharge Pipeline and the Salinas Valley Return Pipeline could result in temporary conflicts with agricultural lands zoned for grazing. These conflicts would constitute a significant impact, but would be reduced to a less-than-significant level with implementation of the identified mitigation. None of the other proposed facilities would result in conflicts Williamson Act contracts or land zoned for agricultural uses.</p>	<p><b>MM 4.16-1: Minimize Disturbance to Farmland</b></p>	<p><b>LSM</b></p> <p>Under the MPWSP Variant, the same temporary conflict with Williamson Act contracts would occur as under the proposed project; the GWR facilities would not add any conflicts with Williamson Act contracts. No MPWSP Variant components would conflict with agricultural zoning. The combined impact from conflicts with Williamson Act contracts and agricultural zoning would be mitigated to a less-than-significant level.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm facilities of the MPWSP Variant to result in conflicts with existing zoning for agricultural use or Williamson Act contracts would be identical to the proposed project because the Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, and Desalinated Water Pipeline alignments would be the same. Like the proposed project, with implementation of the prescribed mitigation, the impact would be reduced to a less-than-significant level.</p>	<p>None Required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.16 Agriculture and Forestry Resources (cont.)</b>				
Impact 4.16-2 (cont.)			<p><u>GWR Facilities:</u></p> <p>There are no properties under a Williamson Act contract within or adjacent to any of the GWR facilities. Several proposed project facilities are located within land zoned for agriculture. The northernmost portions of the Product Water Conveyance System Options would be located in open space areas between the Regional Treatment Plant and the city of Marina northern border that are zoned for Permanent Grazing<sup>3</sup>. The 33-inch pipeline slip-lining portion of the Salinas Treatment Facility project component, the Reclamation Ditch Diversion site, and a portion of the Banco Drain Diversion pipeline alignment are located on land zoned for agriculture (Farmlands 40 acre minimum (F/40)). Water and wastewater infrastructure are an allowable use in both the permanent grazing and F/40 zoning districts and the GWR facilities of the MPWSP Variant would not conflict with the County's zoning code. Implementation of the GWR facilities would not prevent continued use of the land for agricultural production and would not require rezoning or a zoning amendment. While the installation of underground project facilities such as pipelines could temporarily disrupt or displace farmland during the construction period, the GWR facilities would restore the construction sites to per-construction condition and agricultural uses would resume after construction has been completed. This impact is less than significant and no mitigation measures are required.</p>	
Impact 4.16-3: Otherwise change the existing environment such that farmland is converted to non-agricultural use.	<p><b>LSM</b></p> <p>Construction of Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, and Desalinated Water Pipeline could result in inadvertent changes to the existing environment that could result in the conversion of farmland to non-agricultural uses (i.e., adversely affect soil conditions in farmland areas or result in inadvertent damage to agricultural irrigation systems). This is considered a significant impact. Implementation of the identified MM would reduce this impact to a less-than-significant level.</p>	<p><b>MM 4.16-3: Measures to Minimize Indirect Effects on Agricultural Land</b></p>	<p><b>LSM</b></p> <p>Under the MPWSP Variant, the potential for a change to the existing environment to result in conversion of agricultural land to non-agricultural uses would occur as under the proposed project; the GWR facilities would not add any changes to the existing environment that could result in conversion of agricultural land to non-agricultural uses. The combined impact would be mitigated to a less-than-significant level.</p> <p><u>CalAm Facilities:</u></p> <p>The potential for the CalAm-owned facilities to result in other changes in the existing environment that could result in the conversion of farmland to non agricultural use would be identical as that of the proposed project because the Source Water Pipeline, Brine Discharge Pipeline, Salinas Valley Return Pipeline, and Desalinated Water Pipeline alignments would be the same. Like the proposed project, with implementation of the prescribed mitigation, the impact would be reduced to a less-than-significant level.</p> <p><u>GWR Facilities:</u></p> <p>Conversion of farmland to non-farmland uses would not occur due to indirect changes to the existing environment resulting from implementation of the proposed GWR facilities. The GWR facilities would not adversely affect soil conditions in farmland areas or result in inadvertent damage to agricultural irrigation systems. The GWR facilities would increase water quantity for irrigation of farmland in Salinas Valley. Although the salinity of recycled water may increase intermittently in some hydrologic years due to the GWR facilities of the MPWSP Variant, (for example, during late summer and fall seasons during some low rainfall/drought years) they would not result in conversion of farmland to non-farmland uses. Based on these factors, the GWR facilities would have a less-than-significant indirect impact related to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance land to non-agricultural uses.</p>	None Required.

<sup>3</sup> Specifically, a similar RUWAP pipeline was proposed by Marina Coast Water District and received a conditional use permit from Monterey County in 2009 and in that permit they explicitly stated that the proposed pipeline would not conflict with the site zoning (Monterey County Zoning Administrator, 2009)

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

Impact	Proposed Project: Impacts and Mitigation as presented in Chapter 4 of this EIR	Mitigation Measures and Improvement Measures – Proposed Project and CalAm Facilities of the MPWSP Variant	MPWSP Variant: Impacts and Mitigation of GWR Facilities are as presented in the <i>Pure Water Monterey WR DEIR (MRWPCA, April 2015)</i>	Additional Mitigation Measures – GWR Facilities of the MPWSP Variant (MRWPCA, 2015)
<b>4.17 Mineral Resources</b>				
<p><b>Impact 4.17-1:</b></p> <p>Loss of availability of known mineral resources or locally important mineral resource recovery sites.</p>	<p><b>LS</b></p> <p>The subsurface slant wells for the Seawater Intake System are proposed within the CEMEX active mining area. Although mining operations could experience minor disruptions during project construction, mining operations would continue throughout project construction. Assuming that the current methods of sand extraction at the CEMEX sand mining facility would continue during future project operations, the siting of the subsurface slant wells and Source Water Pipeline in the CEMEX active mining area would not interfere with sand mining activities or adversely affect the availability of mineral resources for future recovery. Therefore, impacts on mineral resources at the CEMEX sand mining facility would be less than significant.</p> <p>All other proposed project components located north of Highway 68 would be located in mineral resource zone 2 (MRZ-2) areas—that is, areas where adequate information indicates that significant mineral deposits (in this case, sand for use as aggregate) are either present or are likely to be present. Because the MPWSP Desalination Plant, the ASR-5 and ASR-6 Wells, ASR Pump Station, Terminal Reservoir, and ASR Settling Basin would have a limited footprint and would not be constructed across any active mining areas, they would not result in a significant reduction in the availability of mineral resources (primarily sand dunes) and the impact would be less than significant. Similarly, all pipelines would be installed along the Monterey Peninsula Recreational Trail, the Transportation Agency of Monterey County (TAMC) right-of-way, or existing road rights-of-way, thereby minimizing disturbance to nearby MRZ-2 land. Pipelines would not be constructed across any active mining areas. Therefore, the impact is less than significant.</p>	<p>None required.</p>	<p><b>LS</b></p> <p>The MPSWP Variant would have a similar effect on mineral resources as the proposed project. No facilities would significantly affect the availability of known mineral resources for recovery or substantially interfere with active mining operations. The combined impact would be less than significant.</p> <p><u>CalAm Facilities:</u></p> <p>The impacts of the CalAm-owned facilities related to loss of availability of known mineral resources or locally important mineral resource recovery sites would be similar to the impacts of the proposed project. Although up to three fewer subsurface slant wells would be constructed (seven vs. ten under the proposed project) in the CEMEX active mining area, like the proposed project, the subsurface slant wells under the MPWSP Variant would not significantly affect the availability of known mineral resources for future recovery or substantially interfere with active mining operations. Same as the proposed project, the impact would be less than significant.</p> <p><u>GWR Facilities:</u></p> <p>The siting of the GWR facilities would not result in a loss in the availability of the known mineral resources in the MRZ-2 zoned area either directly (because the work would not consume large amounts of aggregate resources) or indirectly (precluding access to such resources). No aggregate extraction currently is occurring, and future extraction would not be precluded, significantly obstructed, or otherwise affected by the GWR facilities of the MPWSP Variant. The construction of the GWR facilities would not result in the loss of availability of known mineral resources; therefore, the project would have a less than significant impact on mineral resources.</p>	<p>None Required.</p>
<b>4.18 Energy Conservation</b>				
<p><b>Impact 4.18-1:</b> Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during project construction.</p>	<p><b>LSM</b></p> <p>Construction of the proposed project would require the use of fuels for operation of heavy construction equipment (e.g., dozers, excavators, and trenchers), construction vehicles (e.g., dump and delivery trucks), and construction worker vehicles. Operation of some construction equipment (e.g., welding machines and electric power tools) would require the use of electricity. Project construction would also result in indirect energy use associated with the extraction, manufacturing, and transportation of raw materials to make construction materials.</p> <p>Construction activities could result in wasteful or inefficient use of energy if construction equipment is not well maintained, if equipment is left to idle when not in use, or if haul trips are not planned efficiently. The potential for project construction to use large amounts of fuel or energy in a wasteful manner is considered a significant impact. However, implementation of the identified mitigation measures would reduce the impact to a less-than-significant level.</p>	<p><b>MM 4.18-1: Construction Equipment Efficiency Plan</b></p> <p><b>MM 4.10-1c: Idling Restrictions</b></p>	<p><b>LSM</b></p> <p>Under the MPSWP Variant, impacts from use of energy for project construction would be similar to those of the proposed project. Neither the CalAm facilities nor the GWR facilities would result in wasteful or inefficient energy use during project construction, and the combined impact would be less than significant with mitigation.</p> <p><u>CalAm Facilities:</u></p> <p>The impact associated with wasteful or inefficient use of fuel or electricity during construction of the CalAm facilities would be essentially the same as that of the proposed project, although slightly reduced because three fewer slant wells would be constructed. As under the MPWSP, the impact resulting from the wasteful or inefficient use of fuel or electricity during construction of the MPWSP would be reduced to a less-than-significant level with implementation of the identified mitigation measures.</p> <p><u>GWR Facilities:</u></p> <p>Construction of the GWR facilities would not result in a significant impact on the existing energy resources and systems or conflict with energy conservation standards. Construction of the GWR facilities would be required to comply with existing codes and standards for efficiency and conservation, included idling restrictions in Final Regulation Order Regulation For In-Use Off-Road Diesel-Fueled Fleets (California Code of Regulations in Title 13, article 4.8, chapter 9, section 2449, subsection (d)), and Title 24 CalGreen, which requires energy efficiency and conservation. However, construction activities could result in wasteful or inefficient use of energy if construction equipment is not well maintained or if haul trips are not planned efficiently. The potential for project construction to use large amounts of fuel or energy in a wasteful or inefficient manner is considered a significant impact. However, with implementation of Mitigation Measures EN-1 (Construction Equipment Efficiency Plan), which would ensure construction activities are conducted in a fuel-efficient manner, the impact would be reduced to a less-than-significant level.</p>	<p><b>MM EN-1: Construction Equipment Efficiency Plan</b></p>



**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

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<b>4.18 Energy Conservation (cont.)</b>				
<p><b>Impact 4.18-2:</b> Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during project operations.</p>	<p><b>LS</b> Operation of the proposed project would result in the consumption of fuel for CalAm staff commute trips to and from the MPWSP Desalination Plant, and vehicle trips associated with routine maintenance and operations. Project operations would also result in the consumption of electricity to operate the MPWSP Desalination Plant (i.e., reverse osmosis [RO] modules, pumps, lighting, process controls, heating, ventilation, and air conditioning [HVAC] systems) and other proposed facilities (i.e., ASR Pump Station, Valley Greens Pump Station, etc). Although implementation of the proposed project would result in a substantial increase in electrical power demand (48,200 MWh/year minus a baseline energy use of 7,700 MWh/year equals a net increase of 40,500 MWh/year), the use of energy for operation of the MPWSP Desalination Plant is necessary because it would provide a reliable supply of water to meet existing demand for the Monterey District. Therefore, electricity consumed as a result of project operations would not be wasteful or inefficient and the impact related to the use of fuel and energy during project operations would be less than significant.</p>	<p>None Required.</p>	<p><b>LS</b> The MPWSP Variant would use 4,700 MWh/year less energy than the proposed project (35,800 MWh/year net increase in energy use for the MPWSP Variant vs. 40,500 MWh/year net increase for the proposed project). The facilities would not result in wasteful or inefficient use of fuel or energy, and the combined impact to energy resources would be less than significant.  <u>CalAm Facilities:</u> The impact associated with wasteful or inefficient use of fuel or electricity during operation of the CalAm facilities of the MPWSP Variant would be reduced when compared to the proposed project because the smaller desalination plant would consume less energy. As under the MPWSP, energy would not be used in a wasteful or inefficient manner and the impact would be less than significant.  <u>GWR Facilities:</u> The existing Treatment Facilities at the Regional Treatment Plant are partially powered by solar energy and cogeneration of biogas, thus minimizing the need for new electricity generation using fossil fuels. The other GWR facilities would be designed to be energy efficient and not waste energy because the new pumps and electrical facilities would be energy efficient due to the use of variable frequency drives as is the current professional standard for new pumps, and LED lighting as required by CalGreen. Energy would not be used in a wasteful or inefficient manner and the impact would be less than significant</p>	<p>None required.</p>
<p><b>Impact 4.18-3:</b> Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand during project operations.</p>	<p><b>LS</b> Implementation of the proposed project would increase CalAm’s total electrical demand by an amount that would represent approximately 1.5 percent of the County’s electricity usage in 2012. The preliminary review of the proposed project’s annual and maximum electrical demand by the electricity provider, PG&amp;E, has indicated that PG&amp;E has adequate capacity and infrastructure to support the proposed project. Therefore, this impact would be less than significant.</p>	<p>None required.</p>	<p><b>LS</b> As noted above, the combined components of the MPWSP Variant would use 4,700 MWh/year less energy than the proposed project. The combined operation of the CalAm facilities and GWR facilities of the MPWSP Variant would not result in a significant impact due to constraints on local or regional energy supplies.  <u>CalAm Facilities:</u> Impact on local or regional energy supplies associated with operation of the MPWSP Variant would be less than that of the proposed project because the MPWSP Variant involve operation of a smaller desalination plant, with corresponding reduced energy demands, and operation of three fewer slant wells. As under the MPWSP, the impact would be less than significant.  <u>GWR Facilities:</u> All of the electrical power for the GWR facilities will be provided directly from the PG&amp;E grid, which has adequate capacity to supply the GWR facilities demand. The operation of the GWR facilities of the MPWSP Variant would not result in a significant impact due to constraints on local or regional energy supplies, due to requiring additional capacity, or due to adverse effects on peak and busy periods of electricity demand.</p>	<p>None required.</p>
<b>4.19 Population and Housing</b>				
<p><b>Impact 4.19-1:</b> Induce substantial population growth directly (for example, by proposing new homes and businesses).</p>	<p><b>LS</b> Construction and operation of the proposed project would not induce substantial population growth because the construction workforce requirements would substantially be met by the regional labor force and only a small number of new employees would be needed to operate the desalination plant; the other MPWSP facilities would be operated and maintained by existing CalAm employees</p>	<p>None required.</p>	<p><b>LS</b> The MPSWP Variant would result in the same effect on population growth as the proposed project: the CalAm facilities and the GWR would not induce substantial population growth due to construction employment, long-term operational employment, or infrastructure development. The combined impact is less than significant.  <u>CalAm Facilities:</u> The potential for the MPWSP Variant to induce substantial population growth would be the same as under the proposed project because the construction workforce would also be drawn from the regional labor force and essentially the same small number of new employees would be needed to operate the smaller desalination plant. As under the MPWSP, the other CalAm owned facilities would be operated and maintained by existing CalAm staff.</p>	<p>None required.</p>

**TABLE ES-4 (Continued)  
COMPARISON OF THE ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT VS. MPWSP VARIANT**

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<b>4.19 Population and Housing</b>				
Impact 4.19-1 (cont.)			<p><u>GWR Facilities:</u></p> <p>Construction: During the approximate 18- to 21-month construction period, the average daily number of persons necessary for all construction activities at all of the GWR facilities of the MPWSP is estimated to be approximately 135 construction workers. It is expected that the construction workforce requirements could be met with the local labor force within the Monterey Bay Area. This temporary employment condition would not result in a substantial permanent increase in population. Thus, construction of the GWR facilities would not result in substantial population growth in the region and no mitigation measures are required.</p> <p>Operation: The GWR facilities would not result in population growth through development of new residential or commercial uses, and would not induce population growth due to a substantial increase in demand for new permanent employees or extension of roads or public services to unserved locations. At most, only nine new employees would be needed to operate the GWR facilities. Therefore, the GWR facilities would not induce population growth. In addition, the GWR facilities would not produce all of the replacement water that CalAm would need to comply with the State Water Board's order and the Watermaster's adjudication. The primary objective of the GWR facilities is to replenish the Seaside Groundwater Basin that would replace a portion of CalAm's water supply as required by the state orders.</p>	

**Categories of Impact Significance:**

- NI = No Impact
- LS = Less than Significant impact, no mitigation required
- LSM = Less than Significant impact with Mitigation
- SU = Significant and Unavoidable impact for which no mitigation is available
- SUM = Significant and Unavoidable impact with implementation of feasible Mitigation

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## ES.7 CEQA Alternatives

Alternatives to be considered under CEQA are those that avoid or substantially lessen one or more of the significant environmental effects identified for the proposed project. Many of the adverse environmental impacts described in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, were judged to be less than significant. Other adverse impacts were judged to be significant but could be reduced to a less-than-significant level through the implementation of mitigation measures. Still other impacts, few in number, were judged to be significant and unavoidable even with the implementation of mitigation measures.

All impacts would be reduced to less-than-significant levels through the implementation of mitigation measures, with the exception of impacts relative to construction noise and vibration, operational greenhouse gas emissions and indirect impacts from growth. Further, the proposed project may result in cumulative impacts when viewed in combination with other past, present, and reasonably foreseeable future projects. The Draft EIR identifies that the proposed project would contribute to significant and unavoidable cumulative impacts relative to transportation and traffic, and noise and vibration (during construction), and GHG (during operations).

The only significant and unavoidable operational (long-term) impact of the proposed project is to GHG. The sum of the 40-year amortized construction GHG emissions and the total net operation emissions that would be associated with the proposed project is approximately 6,181 metric tons CO<sub>2</sub>e per year. These emissions would exceed the 2,000 metric tons per year significance threshold; therefore, a significant impact would occur. The vast majority of emissions would be a result of electricity consumption. The MPWSP Desalination Plant design already includes state of the art energy recovery and energy efficient features in place of standard energy saving systems (see Chapter 3, Project Description); however, there may be additional energy reducing features available to further reduce the electrical consumption associated with the proposed project. In addition, it may be feasible for CalAm to obtain “clean” renewable energy for operations of the proposed project, which would reduce the overall carbon footprint of the project. However, the CPUC cannot substantiate numerically that the mitigated GHG emissions would be reduced to a less-than-significant level, and no alternative that would meet the GHG emissions thresholds, and meet the project objectives, is reasonable.

The alternatives analysis in Chapter 7 includes a comprehensive evaluation of a range of intake types and locations, plant locations, outfalls, pipelines and Salinas Valley Return options. Chapter 7 includes an analysis of two No Project alternatives, and four Action alternatives. The analysis concludes that the No Action alternative is the Environmentally Superior Alternative, but neither No Action alternative meets the basic project objectives. Therefore, the MPWSP Variant is the Environmentally Superior Alternative: it reduces the overall energy use of the proposed project which results in reduced GHG emissions, and the impacts on the Salinas Valley Groundwater Basin are reduced as a result of a reduction in pumping at the slant wells, in addition to the provision of additional irrigation water to the CSIP by the GWR Project.



## ES.8 Issues to be Resolved and Areas of Controversy

Pursuant to Section 15123(b)(1) of the state CEQA Guidelines, an EIR shall identify areas of controversy known to the lead agency including issues raised by agencies and the public. Issues of concern were raised through the scoping and public meetings conducted in association with circulation of the NOP.

- **Demand To Be Met by the Proposed Project and Desalination Plant Sizing**

Comments were received on the MPWSP EIR NOP advocating that the desalination plant be sized to provide supply to replace the portions of CalAm's existing Carmel River and Seaside Groundwater Basin supplies that have been constrained by legal decisions (in compliance with SWRCB Orders 95-10 and 2009-0060 and the adjudication of the Seaside Groundwater Basin) to meet current service area demand only. Other NOP comments expressed support for sizing the plant to accommodate differing degrees of additional future demand (e.g., demand associated with the development of vacant legal lots of record, demand associated with full general plan buildout, etc.). Chapter 2, Water Demand, Supplies, and Water Rights, discusses existing service area demand and supplies and the level of demand the MPWSP proposes to meet, and Chapter 8, Growth-Inducement Potential and Secondary Effects of Growth, evaluates the growth inducement potential of the water supply proposed to be provided by the MPWSP.

- **Groundwater and Water Rights**

CalAm's proposed use of subsurface slant wells to withdrawal source water for the MPWSP Desalination Plant is the subject of two controversies: (1) whether CalAm has the legal right to extract groundwater from the Salinas Valley Groundwater Basin (SVGB); and (2) whether implementation of the MPWSP and operation of the subsurface slant wells would exacerbate seawater intrusion in the SVGB. The proposed subsurface slant wells at CEMEX would extend offshore and be screened in aquifer units of the SVGB that have long been intruded by seawater. Although the subsurface slant wells would draw seawater (i.e., source water for the MPWSP Desalination Plant) from beneath the ocean floor, a fraction of the source water would be drawn from inland portions of the SVGB.

In 2012, the CPUC asked the SWRCB to provide an opinion regarding whether CalAm has the legal right to extract source water for the MPWSP Desalination Plant from offshore aquifers of the SVGB. The SWRCB has indicated that for CalAm to appropriate groundwater from the SVGB, the MPWSP EIR must demonstrate that the proposed project will not harm or cause injury to other basin users (SWRCB, 2013) and made certain recommendations for further study.

The recommendations of the SWRCB are being implemented by a Hydrogeologic Working Group (HWG) comprised of licensed hydrogeologists with pertinent experience in the Monterey Bay region. The HWG was a result of an August 2013 Settlement Agreement between CalAm and 16 parties whereby CalAm agreed their hydrologist and technical team would work with the Salinas Valley Water Coalition's and Monterey County Farm Bureau's assigned hydrogeologists, and other technical experts designated by CalAm. The HWG developed a work plan in order to reach agreement about the studies, well tests, field work, modeling, monitoring, and other data analyses that is needed to assess and characterize whether and to what extent the proposed operation of the MPWSP may adversely affect the SVGB and the water supply available to legal water users thereof. The

resulting hydrogeological study informed the analysis presented in Section 4.4, Groundwater Resources, as well as the corresponding analysis in Chapter 5, Cumulative Impacts, Chapter 6, MPWSP Variant, and Chapter 7, Alternatives. Refer to Section 2.7 in Chapter 2, Water Demand, Supplies, and Water Rights, for a discussion of water rights.

- **Private (Versus Public) Ownership of the Desalination Plant**

A Monterey County ordinance (Health and Safety Code Section 10.72.030 [the Monterey County Desalination Ordinance]) prohibits ownership of a desalination plant by a private entity and at one point in time, Monterey County had filed a lawsuit against CalAm on the issue. In October 2012 and July 2013, the CPUC concluded that the Monterey County Desalination Ordinance is in conflict with California law and that the CPUC's authority preempts the Monterey County Desalination Ordinance to the extent that the ordinance purports to apply to public utility facilities or operations. The CPUC's 2013 decision noted that the Court action initiated by the County had since been dismissed. The Settlement Agreement entered into between CalAm and other parties in August 2013 includes provisions that address project governance and financing that are intended to ensure the consideration of community values and public agency representation in all the important aspects of the MPWSP and to lower project costs, respectively. While the CPUC decisions and provisions of the proposed Settlement Agreement address concerns related to the private ownership of the MPWSP, it is expected that some concerns about this issue may remain.

- **Brine Discharge**

During scoping and evidentiary hearings, many commenters expressed concerns about the discharge of brine to Monterey Bay from desalination plant operations. Comments primarily focused on the potential effect of brine discharges on benthic habitats and the marine environment, including impacts close to the point of discharge as well as longer term impacts at greater distances associated with the migration of the brine plume. Concerns were raised about the consistency of MPWSP brine discharges with Monterey Bay National Marine Sanctuary and California Ocean Plan standards and requirements, the effects of combining brine with wastewater effluent, and the reduction of effluent that would be available for use as an alternative water source if effluent was used to dilute brine.

The effects of brine discharges on water quality are addressed in Chapter 4, Section 4.3, Surface Water Hydrology and Water Quality; the effects of brine discharges on the marine environment are addressed in Section 4.5, Marine Biological Resources; and the effects of the proposed project on outfall capacity are addressed in Section 4.13, Public Services and Utilities. The cumulative effects of the proposed project in combination with other projects are addressed in Chapter 5, Cumulative Impacts.

- **Alternatives**

While this EIR evaluates the MPWSP as proposed by CalAm, other parties are pursuing the development of other desalination projects to provide potable water supply to the Monterey Peninsula and beyond. The Monterey Bay Regional Water Project, proposed by DeepWater Desal, LLC, would provide up to 25,000 afy of potable water supply to serve participating communities in the Monterey Bay region, potentially including the Monterey Peninsula, Castroville, Salinas, and parts of Santa Cruz County. The Peoples' Moss Landing Water Desalination Project (Peoples' Moss Landing Project), proposed by Moss Landing Commercial Business Park, LLC, would provide 13,404 afy (11.97 mgd) of potable water

supply to serve North Monterey County and the Monterey Peninsula. Neither of these projects appears to be as far along in planning, development, and environmental evaluation as the proposed project; as of April 2015, neither applicant had filed a Notice of Preparation of an EIR, although various studies have been prepared for each. Chapter 7, Alternatives, presents information on these other desalination projects based on available information, and includes a comparison of the environmental impacts of the key desalination project components (intakes, outfalls, and plant sites) of the Deep Water Desal and Peoples' Moss Landing proposed projects, and other component options, with the corresponding components proposed for the MPWSP.

At its meeting on January 21, 2015, the Marina Coast Water District (MCWD) Board of Directors approved motions directing staff to move forward with actions related to planning and development of a 2,700 afy desalination facility to serve the Fort Ord community. At its meeting on March 13, 2015, the Board of the Fort Ord Reuse Authority (FORA) received a presentation from MCWD regarding its desalination planning process, but the FORA Board stopped short of endorsing the proposed design process. Nonetheless, the MCWD has an approved CEQA document for a 1.5 mgd desalination plant to be located on their property at the end of Reservation Road. How the MPWSP would impact the MCWD proposed desalination project, is evaluated in Chapter 5, Cumulative analysis.

- **Coastal Erosion**

Sea level rise is expected to continue over the next century, in turn accelerating coastal erosion and resulting in the inland retreat of the Monterey Bay coastline. Concerns were raised that coastal erosion could expose subsurface elements of the proposed project such as the slant wells, slant well vaults, and associated infrastructure, potentially damaging them and shortening their life span, while the exposed wells and associated structures could also present a hazard to recreational activities. A project-specific coastal retreat study was conducted to evaluate erosion impacts associated with project components in the coastal zone and determined that the slant wells, in their originally-proposed locations, could be undermined and exposed within the project lifetime. Consequently, the slant well clusters were moved further inland (to the locations shown in Figure 3-3 of Chapter 3, Project Description). Section 4.2, Geology, Soils, and Seismicity, describes the issues related to sea level rise and coastal erosion in more detail and evaluates the potential impacts associated with coastal erosion on the proposed slant wells and associated infrastructure.

- **Intake Technologies**

Several state and federal regulatory and permitting agencies (SWRCB, California Coastal Commission, and Monterey Bay National Marine Sanctuary) will not consider permitting an open-water intake unless a subsurface intake has been deemed infeasible or would result in greater environmental impacts. For example, the CCC, SWRCB and RWQCBs require permit applicants for open-water intakes to first consider the feasibility of subsurface intake methods (i.e., vertical wells, slant wells) and to demonstrate that subsurface intake alternatives are not feasible or would result in greater environmental effects before they will consider issuing permits for open-water intakes. Likewise, NOAA's Monterey Bay National Marine Sanctuary and National Marine Fisheries Service also established guidelines for discretionary approvals for new intake structures stating that subsurface intakes should be used where feasible and beneficial. CalAm has proposed subsurface intakes (slant wells) to supply feedwater to the MPWSP. Chapter 4 of this EIR evaluates the potential impacts of the proposed action and Chapter 7, Alternatives presents an extensive analysis of alternative intake technologies and locations.

- **Environmentally Sensitive Habitat and The Coastal Act**

In order to implement the MPWSP-proposed subsurface intakes, CalAm will be required to secure a Coastal Development Permit (CDP) under the California Coastal Act. The City of Marina has an approved Local Coastal Plan and would be responsible for issuing this permit. The CalAm Summer 2014 application to the City of Marina for a CDP associated with the exploratory bore holes at CEMEX, and the City's Fall 2014 denial of CalAm's application for a CDP associated with the test well, proved to be very controversial. Even after the CCC approved the test well in November 2014, several lawsuits were filed to stop the drilling and the associated pump test. Section 4.6, Biological Resources addresses the potential terrestrial biological impacts associated with construction and operation of the slant wells at CEMEX; Section 4.4, Groundwater Resources addresses the potential groundwater impacts associated with construction and operation of the slant wells at CEMEX, and; Chapter 5 evaluates the potential cumulative impacts associated with the test well, the production wells and the conversion of the test well to a production well.

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