

4.13 Public Services and Utilities

Sections	Tables
4.13.1 Setting / Affected Environment	4.13-1 Local Utility and Public Service Providers, by Jurisdiction
4.13.2 Regulatory Framework	4.13-2 Applicable Regional and Local Plans and Policies Relevant to Public Services and Utilities
4.13.3 Evaluation Criteria	4.13-3 Summary of Impacts – Public Services and Utilities
4.13.4 Approach to Analysis	4.13-4 Brine Stream and Treated Wastewater Effluent Flows through the MRWPCA Outfall and Diffuser
4.13.5 Direct and Indirect Effects of the Proposed Project	
4.13.6 Cumulative Effects of the Proposed Project	

This section evaluates the potential impacts on public services and utilities resulting from implementation of the Monterey Peninsula Water Supply Project (MPWSP or proposed project). Public services in the project area include fire and police protection, emergency medical services, hospitals, and schools. Public utilities in the project area provide solid waste disposal, water, wastewater, stormwater drainage, electricity, natural gas, and telecommunications services. This section also presents mitigation measures to reduce or eliminate potential impacts, as appropriate.

*Comments received on the 2015 Draft EIR requested that a copy of the 2015 E2 Consulting Engineers Technical Memorandum: Groundwater Replenishment Project Evaluation of Existing Outfall be made available for review (and direct the public to its location), and that additional information about the pipeline be included in the Draft EIR/EIS; the comment is addressed in Impact 4.13-5. In addition, comments requested that **Mitigation Measure 4.13-1e** be modified to require coordination with local fire departments when work is proposed near a gas utility line; the comment has been addressed in **Mitigation Measure 4.13-1e**. Comments also requested that **Mitigation Measures 4.13-5a** and **5b** address the potential need for lining the MRWPCA outfall and include a discussion of potential secondary impacts related to lining activities and outfall maintenance; the comment has been addressed in Impact 4.13-5, Section 4.13.5.3, Secondary Impacts of Mitigation Measure 4.13-5a, and Section 4.13.5.4 Secondary Impacts of Mitigation Measure 4.13-5b.*

4.13.1 Setting / Affected Environment

The study area for evaluation of impacts on public services and utilities includes the service areas for the public services and utilities that serve the project area. Information on public services and utilities in the project area was derived from available planning documents, public utility websites, and consultation with local agency personnel. **Table 4.13-1** shows the jurisdictions within which the project components would be located and summarizes utility and public service providers in the project area.

**TABLE 4.13-1
LOCAL UTILITY AND PUBLIC SERVICE PROVIDERS, BY JURISDICTION**

Jurisdiction/ Project Component	Monterey County Regional Fire District	Monterey County Sheriff's Office	North County Fire Protection District	Monterey Regional Waste Management District	Monterey Regional Water Pollution Control Agency	Monterey County Water Resources Agency	Monterey Peninsula Water Management District	Monterey Peninsula Unified School District	Pacific Gas and Electric Company	California American Water Company	Marina Fire Department	Marina Police Department	Marina Coast Water District	Seaside Fire Department	Seaside Police Department	Seaside County Sanitation District	City of Monterey Fire Department	City of Monterey Police Department	North Monterey County Unified School District	Carmel Unified School District
Unincorporated Monterey County																				
Source Water Pipeline																				
MPWSP Desalination Plant																				
New Desalinated Water Pipeline																				
Brine Discharge Pipeline	✓	✓	✓	✓	✓	✓	✓		✓	✓									✓	✓
Pipeline to CSIP Pond																				
Castroville Pipeline																				
Carmel Valley Pump Station																				
Main System–Hidden Hills Interconnection Improvements																				
Ryan Ranch–Bishop Interconnection Improvements																				
City of Marina																				
Subsurface Slant Wells																				
Source Water Pipeline				✓	✓	✓	✓	✓	✓		✓	✓	✓							
New Desalinated Water Pipeline																				
New Transmission Main																				
City of Seaside																				
New Transmission Main				✓	✓	✓	✓	✓	✓					✓	✓	✓				
ASR Pipelines																				
Terminal Reservoir																				
Federal Lands^a																				
ASR-5 and ASR-6 Wells					✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓				
City of Monterey																				
Ryan Ranch–Bishop Interconnection Improvements				✓	✓	✓	✓	✓	✓	✓						✓	✓	✓		
Castroville CSD																				
Castroville Pipeline		✓	✓	✓	✓	✓			✓										✓	

NOTE:

^a Federal Lands refers to lands owned by the U.S. Army that are located within the cities of Monterey and Seaside. These lands include the Presidio of Monterey and the portions of the former Fort Ord military base that are zoned and designated for Military land uses, such as the Fitch Park military housing area.

4.13.1.1 Fire Protection, Law Enforcement, and Emergency Services

Fire Protection

Several local agencies provide fire protection service in the project area. Most of these agencies serve more than one jurisdiction or area.

Unincorporated Monterey County

Two agencies provide fire protection service to the unincorporated area. The North County Fire Protection District serves the unincorporated area north of the city of Marina, which includes the area where the Castroville Pipeline would be installed (NCFPD, 2013). The Monterey County Regional Fire District (MCRFD) serves approximately 350 square miles east of the City of Marina, including the former Fort Ord military base and areas southeast of the City of Monterey. The MCRFD provides emergency medical and fire protection services (MCRFD, 2016)

City of Marina

The Marina Fire Department serves the city of Marina as well as the parts of the former Fort Ord military base that were deeded to Marina (City of Marina, 2016).

Cities of Seaside and Del Rey Oaks

The Seaside Fire Department provides both emergency response and fire prevention services to the City of Seaside; the Department also provides these services on a contractual basis to the city of Del Rey Oaks and parts of the former Fort Ord military base that were deeded to Seaside (Seaside Fire Department, 2014).

City of Monterey

The City of Monterey Fire Department provides fire protection to the city of Monterey and all areas within its jurisdictional boundaries, including the Army Defense Language Institute and Foreign Language Center, the Presidio of Monterey, and the Naval Postgraduate School and its housing at La Mesa Village (City of Monterey, 2016).

Police

The Monterey County Sheriff's Office operates the county jail facilities and provides police services to nearly the entire unincorporated county area (Monterey Sheriff, 2016). The cities of Marina, Monterey, Pacific Grove, and Seaside each have an independent police force that serves the areas within their city limits. The Seaside and Marina Police Departments also serve the annexed portions of the former Ford Ord military base.

Emergency Medical Services

The Monterey County Emergency Medical Services Agency is a Monterey County Health Department agency that incorporates over 100 participating entities under one jurisdictional authority, including fire departments, ambulance companies, hospitals, and police departments

(MCEMSA, 2014). Monterey County has four major hospitals: Community Hospital of the Monterey Peninsula in Monterey, Natividad Medical Center in Salinas, Salinas Valley Memorial Hospital in Salinas, and George L. Mee Memorial Hospital in King City (Monterey County, 2016).

4.13.1.2 Schools and Libraries

Schools

Three school districts -- the Monterey Peninsula Unified School District, the North Monterey County Unified School District, and the Carmel Unified School District-- serve the project area. The Monterey Peninsula Unified School District serves the cities of Marina, Seaside, Sand City, Del Rey Oaks, and Monterey, as well as the former Fort Ord military base (MPUSD, 2016). The North Monterey County Unified School District serves northern communities in unincorporated Monterey County, including Castroville and Prunedale (NMCUSD, 2016).

Libraries

The project area is served by two library systems: Monterey County Free Libraries and City of Monterey Public Library. The Monterey County Free Libraries serve all of Monterey County and have branches in the cities of Marina, Seaside, and Castroville (MCFL, 2016).

4.13.1.3 Solid Waste Services

The Monterey Regional Waste Management District manages the Monterey Peninsula's solid waste collection, disposal and recycling system. It also receives and processes most of Monterey County's sewage sludge from the adjacent MRWPCA Regional Wastewater Treatment Plant. The Waste Management District serves an 853-square-mile area and a population of approximately 170,000 people. The service area encompasses the cities of Marina, Seaside, Del Rey Oaks, Monterey, Carmel-by-the-Sea, and Pacific Grove and the unincorporated areas of Big Sur, Carmel Highlands, Carmel Valley, Castroville, Corral De Tierra, Laguna Seca, Moss Landing, Pebble Beach, San Benancio, Sand City, and Toro Park (MRWMD, 2015).

The Waste Management District operates the Monterey Peninsula Landfill, a materials recovery facility, and a transfer station at a 475-acre site north of the city of Marina. All solid waste generated by project construction or operation would be disposed of at the landfill or diverted for recycling or reuse at the materials recovery facility. The landfill operates 6 days per week and is permitted to receive 3,500 tons of waste per day; it has a remaining capacity of approximately 48.5 million cubic yards and is expected to reach its permitted capacity in 2107 (CalRecycle, 2016). The landfill receives approximately 300,000 tons of waste per year, which averages to less than 1,000 tons of waste per day (MRWMD, 2016). In addition to the more commonly recycled and reused materials (such as paper, cardboard, bottles, and cans), materials targeted by operators at the materials recovery facility include commercial waste, wood waste, and yard waste, construction and demolition debris, and materials in self-haul loads (MRWMD, 2015).

4.13.1.4 Water

The water districts and facilities that provide drinking water to residents and businesses in the project area are described below. Some of these districts also provide sewer services and infrastructure (see Section 4.13.1.5).

Marina Coast Water District

The Marina Coast Water District (MCWD) provides water for residents in the city of Marina and to areas within the former Fort Ord military base. The MCWD's water supply comes from three groundwater wells located in the 900-foot-deep aquifer of the Salinas Valley Groundwater Basin (MCWD, 2016a). The MCWD also has a desalination plant with a capacity of 300 acre-feet per year (afy); the plant is capable of providing up to 13 percent of the annual water demand, but has not operated in recent years (MCWD, 2016b).

California American Water Company

As described in Chapter 3, Description of the Proposed Project, California American Water Company (CalAm) supplies water to most of the jurisdictions in the project area (see **Figure 3-1**). CalAm's existing water supply sources for the Monterey District service area are discussed in Chapter 2, Water Demand, Supplies, and Water Rights.

Seaside Municipal Water System

The Seaside Municipal Water System, which is operated and maintained by the City of Seaside, provides water service to a limited number of residents along General Jim Moore Boulevard on the east side of the city. The system includes one groundwater production well and two 500,000-gallon water tanks (City of Seaside, 2016).

Castroville Community Services District

The Castroville Community Services District provides water to more than 7,250 customers via three domestic water production wells with an estimated capacity of over 4.4 mgd. The water system includes two water storage tanks with a capacity of 1.1 million gallons (Castroville CSD, 2016a).

4.13.1.5 Wastewater Treatment

Two wastewater treatment providers serve the project area: the Monterey Regional Water Pollution Control Agency (MRWPCA) and the Carmel Area Wastewater District.

Monterey Regional Water Pollution Control Agency

The MRWPCA operates the Regional Wastewater Treatment Plant, which is north of the city of Marina and east of the proposed MPWSP Desalination Plant site on Charles Benson Road. The MRWPCA is Monterey County's primary provider of wastewater treatment. The MRWPCA serves the communities of Pacific Grove, Monterey, Del Rey Oaks, Seaside, Sand City, Marina,

Castroville, Moss Landing, Boronda, Salinas, and Fort Ord and some unincorporated areas in northern Monterey County (MRWPCA, 2016a); sewer infrastructure is maintained and managed by the Marina Coast Water District, the City of Monterey, the Seaside County Sanitation District, the Castroville Sanitary District, and the MRWPCA. The MRWPCA maintains 25 pump stations and approximately 30 miles of pipeline (MRWPCA, 2016b). The MRWPCA also operates a water recycling facility at the treatment plant and along with the Monterey County Water Resources Agency, manages the recycled water distribution system including the Salinas Valley Reclamation Project and the Castroville Seawater Intrusion Project (CSIP). The recycled water is then distributed to Salinas Valley agricultural growers for irrigation use. Excess wastewater receives secondary treatment before being discharged to Monterey Bay via the existing MRWPCA ocean outfall and diffuser (MRWPCA, 2016c), which would also be used for the proposed project brine discharge.

Carmel Area Wastewater District

The Carmel Area Wastewater District provides wastewater collection, treatment, and disposal for a 5.5-mile service area that encompasses Carmel-by-the-Sea and outlying county areas from Carmel Bay to the west, Carmel Highlands to the south, and Del Monte Forest to the north. The district serves a population of approximately 11,000 people. The district's treatment plant, located on the south bank of the Carmel River west of Highway 1, includes a facility that recycles water for irrigation use at several golf courses, including Pebble Beach, Poppy Hills, and Spanish Bay (Carmel Area Wastewater District, 2016).

4.13.1.6 Stormwater Drainage

Monterey County

Monterey County Water Resources Agency operates and maintains drainage facilities in 14 drainage maintenance zones and districts throughout Monterey County. The stormwater drainage system is composed of approximately 57 miles of drainage ways (e.g., streams, drainage ditches, and drainage channels); eight pump stations; nine miles of river levees; two large earthen dams; and numerous culverts, tide gates, and concrete structures (MCWRA, 2016).

Cities of Monterey and Seaside

The City of Monterey and the City of Seaside maintain stormwater conveyance infrastructure and natural drainage courses for their respective jurisdictions.

Castroville Community Services District

The Castroville Community Services District maintains 16 miles of storm drain main lines, four stormwater treatment units (for removing trash, debris and hydrocarbons), and 178 catch basins within its storm drain system (Castroville CSD, 2016b).

4.13.1.7 Electricity, Natural Gas, and Telecommunications

Pacific Gas and Electric Company (PG&E) provides electricity and natural gas to all of Monterey County, and Pacific Bell provides telephone service. Section 4.18, Energy Conservation, presents more information on PG&E service in the project area.

4.13.2 Regulatory Framework

This section provides an overview of notable federal, state, and local environmental laws, policies, plans, regulations, and/or guidelines (hereafter referred to generally as “regulatory requirements”) relevant to public services and utilities. A brief summary of each is provided, along with a finding regarding the project’s conformity with those regulatory requirements. The conformity findings concern the project as proposed, without mitigation. Where the project, as proposed, would be consistent with an applicable regulatory requirement, no further discussion of project consistency with that regulatory requirement is provided. Where the project, as proposed, would be potentially inconsistent with an applicable regulatory requirement, the reader is referred to a specific impact topic within Section 4.13.5, Direct and Indirect Effects of the Proposed Project. In that subsection, the significance of the potential conflict is evaluated. Where the effect of the potential conflict would be significant, feasible mitigation is identified to resolve or minimize that conflict.

4.13.2.1 Federal Regulations

There are no federal regulations that pertain to Public Services and Utilities that are applicable to the proposed project.

4.13.2.2 State Regulations

California Coastal Act

The California Coastal Act (Public Resources Code Section 30000 et seq.) was enacted by the State Legislature in 1976 to provide for the long-term management of lands within California’s coastal zone boundary. The Coastal Act includes specific policies for management of natural resources and public access within the coastal zone. Of primary relevance to public services and utilities is a Coastal Act policy concerning designing and limiting new or expanded public works facilities such that they (and the needs/growth they accommodate) are protective of coastal resources. A preliminary assessment of MPWSP consistency with these priorities is provided here. Final determinations regarding project consistency are reserved for the Coastal Commission. The MPWSP has been designed to accommodate existing and projected future demand consistent with the General Plans (and Local Coastal Programs) of the jurisdictions in CalAm’s service area. As future development in the service area would need to be consistent with General Plan and Local Coastal Program requirements, the project would not conflict with Coastal Act policies related to public works facilities.

The California Coastal Act contains numerous enforceable policies that are directed at protecting and, where feasible, restoring coastal water quality. The California Coastal Commission applies

the Coastal Act's water quality policies when reviewing applications for coastal development permits in California state waters. The Coastal Commission also applies the water quality policies when reviewing federally licensed and permitted activities to ensure they are consistent with the State's coastal management program in accordance with the Coastal Zone Management Act federal consistency provision.

The Coastal Commission considers an application for a coastal development permit to cover the requirement for an applicant submitting a consistency certification to the Coastal Commission if the activity is located in state waters. Typically, the Coastal Commission will provide its response (concurrence, conditional concurrence, or objection) in its staff report for the coastal development permit.

California Public Utilities Commission

The California Public Utilities Commission (CPUC)—the CEQA lead agency for this project—is responsible for ensuring that investor-owned (private) water, energy, and telecommunications utilities deliver safe, clean, and/or reliable services to customers at reasonable rates. The CPUC does not regulate publicly-owned utilities. The CPUC regulates CalAm, the project applicant.

California Integrated Waste Management Act of 1989 and Assembly Bill 341

The California Integrated Waste Management Board (CIWMB) oversees, manages, and tracks waste generated in California. The authority and responsibilities of the CIWMB were promulgated in Assembly Bill 939 and Senate Bill 1322, which were signed into law as the California Integrated Waste Management Act of 1989 (Public Resources Code [PRC], Division 30). The California Integrated Waste Management Act, as modified by subsequent legislation, mandated all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of wastes by 2000 (PRC Section 41780). In January 2010, the CIWMB changed its name to the Department of Resources, Recycling, and Recovery (CalRecycle).

Assembly Bill 341, which amends the Integrated Waste Management Act of 1989 and was adopted by the California legislature in October 2011, directs CalRecycle to adopt a state policy that actively seeks to achieve a goal of diverting 75 percent of solid waste from landfills by 2020. The new legislation focuses largely on commercial waste generators, as this sector was identified as the most in need of improved waste management. Assembly Bill 341 does not alter the 50 percent diversion mandate; rather, it is a “legislative declaration of policy” to guide CalRecycle's administration of the California Integrated Waste Management Act (Theroux, 2012).

A jurisdiction's diversion rate is the percentage of total generated waste it diverts from disposal through source reduction, reuse, and recycling programs. The state determines compliance with the 50 percent diversion mandate through a complex formula. Use of the formula requires cities and counties to conduct empirical studies to establish a base-year waste generation rate against which future diversion is measured. The diversion rate in subsequent years is determined through deduction instead of direct measurement. Rather than counting the amount of material recycled and composted, the city or county tracks the amount of material disposed of at landfills and then

subtracts that amount from the base-year amount; the difference is assumed to be diverted (PRC Section 41780.2).

Construction of the MPWSP project components would potentially be inconsistent with the California Integrated Waste Management Act of 1989 and Assembly Bill 341 because the total volume of construction wastes and excess spoils could be landfilled if not recycled properly. This issue is discussed in Impact 4.13-2 below.

Utility Notification Requirements

California law (Government Code Section 4216 et seq.) requires owners and operators of underground utilities to become members of, participate in, and share the costs of a regional notification center. Government Code Section 4216 requires that persons planning to conduct any excavation contact the regional notification center. Section 4216 includes several related requirements, including requirements for excavations near “high priority subsurface installation”, or high risk facilities, which include high-pressure natural gas pipelines and other pipelines that are potentially hazardous to workers or the public if damaged or ruptured. Underground Service Alert North (USA North) is the notification center for the project area. USA North receives planned excavation reports and transmits the information to all participating members that may have underground facilities at the location of excavation. The USA North members will then mark or stake their facility, provide information about the location, or advise the excavator of clearance (USA North, 2016).

Construction of the MPWSP would be potentially inconsistent with California’s Utility Notification Requirements (Government Code Section 4216 et seq.) because CalAm’s construction contractors could conduct excavations without sufficient notification to owners and operators of utilities or proper planning when in the vicinity of high priority subsurface installations. This issue is discussed in Impact 4.13-1.

NPDES Waste Discharge Program

The National Pollution Discharge Elimination System (NPDES) waste discharge requirements and the NPDES Permit for MRWPCA Regional Wastewater Treatment Plant are discussed in Section 4.3.2.2, State Regulations.

4.13.2.3 Local Regulations

Table 4.13-2 describes the state, regional, and local land use plans, policies, and regulations pertaining to public services and utilities that are relevant to the proposed MPWSP and that were adopted for the purpose of avoiding or mitigating an environmental effect. Also included in **Table 4.13-2** is an analysis of project consistency with such plans, policies, and regulations. Where the analysis concludes the proposed project would not conflict with the applicable plan, policy, or regulation, the finding is noted and no further discussion is provided. Where the analysis concludes the proposed project may conflict with the applicable plan, policy, or regulation, the reader is referred to Section 4.13.5, Direct and Indirect Effects of the Proposed

Project. In that subsection, the significance of the potential conflict is evaluated. Where the effect of the potential conflict would be significant, feasible mitigation is identified to resolve or minimize that conflict.

Monterey County Integrated Waste Management Plan

The Monterey County Integrated Waste Management Plan incorporates relevant provisions of the California Green Building Standards Code, which Monterey County has adopted. Diversion rates related to construction are from the California Green Building Standards Code. Section 5.408.1 of the code requires non-residential projects to recycle and/or salvage for reuse a minimum of 50 percent of nonhazardous construction and demolition waste. Further, Section 5.408.3 requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled (unless the vegetation or soil is contaminated with disease or pest infestation.) CalRecycle reviews the Monterey County Integrated Waste Management Plan every 5 years, most recently in December 2012. The latest update to the Integrated Waste Management Plan ensures compliance with all current regulatory and reporting requirements (MCHD, 2012).

Construction of all MPWSP project components would potentially be inconsistent with the Monterey County Integrated Waste Management Plan because the total volume of construction wastes and excess spoils could be landfilled if not recycled properly. This issue is discussed in Impact 4.13-2 below.

**TABLE 4.13-2
APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO PUBLIC SERVICES AND UTILITIES**

Project Planning Region	Applicable Plan	Plan Element/Section	Project Component(s)	Specific Plan, Policy, or Ordinance	Relationship to Avoiding or Mitigating a Significant Environmental Impact	Project Consistency with Plan, Policy, or Ordinance
City of Marina (coastal zone and inland areas)	City of Marina General Plan	Community Infrastructure	Subsurface Slant Wells, Source Water Pipeline, new Desalinated Water Pipeline, and new Transmission Main	<p>Policy 3.3: The intent of the General Plan Transportation and Infrastructure Element is to ensure that the requirements for transportation, water supply, wastewater collection and treatment, storm water drainage, and solid-waste disposal generated by existing and future development are adequately provided for. It is also the intent of this section to ensure, to the maximum extent possible, that the provision of such services does not have a deleterious effect on either natural resources or the quality of life of residents of Marina or other potentially affected areas. The major concerns of this section are outlined below:</p> <ol style="list-style-type: none"> 11. Minimize the consumption of water for urban purposes and make maximum possible use of recycled water. 12. Design stormwater runoff facilities so as to the recharge ground water aquifers while protecting the water quality of these aquifers. 13. Ensure long-term availability of required facilities and services prior to approval of new construction. 14. Support water resource programs, including desalinization and reclamation efforts, to provide an adequate water supply to accommodate General Plan permitted growth. 15. Promote reductions in the generation of non-recyclable solid waste. 	The intent of this policy is to ensure sufficient and environmentally responsible provision of public utilities for existing and future development.	<u>Consistent:</u> The purpose of the MPWSP is to replace those portions of CalAm's existing supplies that have been constrained by legal decisions regarding diversions from the Carmel River and pumping from the Seaside Groundwater Basin. The proposed project would provide a reliable water supply to meet existing demands and would accommodate the demands of some new development. The pipelines are sized to accommodate growth, with new pumping. The proposed project would be required to comply with State and local regulations regarding stormwater management, waste diversion, and recycling.
City of Marina (coastal zone and inland areas)	City of Marina General Plan	Community Land Use	Subsurface Slant Wells, Source Water Pipeline, new Desalinated Water Pipeline, and new Transmission Main	<p>Policy 2.4: The intent of the community land use element is to help achieve the overall General Plan goals of providing a satisfying, safe and healthful living and working environment and promoting the economic well-being of city residents and businesses. To accomplish these ends, City planning, regulatory and development decisions shall be governed by the following policies which adhere to the goals in the "Introduction" (Chapter 1).</p> <ol style="list-style-type: none"> 13. The City will provide adequate urban services, including water, only to areas within its designated Urban Growth Boundary. The costs of providing the public facilities and services needed for new development shall be borne by new development unless the City chooses to help assume such costs in order to obtain identified community-wide benefits. 	The intent of this policy is to encourage growth in urban areas and minimize impacts of development in areas outside the urban growth boundary.	<u>Consistent:</u> The subsurface slant wells, Source Water Pipeline, new Desalinated Water Pipeline, and new Transmission Main are within the Marina Urban Growth Boundary and would not require the need for urban services expansion.
City of Seaside (coastal zone and inland areas)	Seaside General Plan	Water Supply, Treatment, and Distribution	New Transmission Main; ASR Conveyance Pipeline; ASR Pump-to-Waste Pipeline; ASR Recirculation Pipeline; Terminal Reservoir	Policy LU-5.2: Work cooperatively with local and regional water suppliers to ensure adequate water reserves.	The intent of this policy is to ensure adequate local and regional water supplies.	<u>Consistent:</u> The purpose of the MPWSP is to provide water supplies for those portions of CalAm's existing supplies that have been constrained by legal decisions regarding CalAm's diversions from the Carmel River and pumping from the Seaside Groundwater Basin. Therefore this project would ensure an adequate local and regional water supply.
City of Seaside (coastal zone and inland areas)	Seaside General Plan	Water Supply, Treatment, and Distribution	New Transmission Main; ASR Conveyance Pipeline; ASR Pump-to-Waste Pipeline; ASR Recirculation Pipeline; Terminal Reservoir	Policy LU-5.3: Actively promote water conservation by City residents and businesses	This policy is intended to promote water conservation	<u>Consistent:</u> The purpose of the MPWSP is to provide water supplies for those portions of CalAm's existing supplies that have been constrained by legal decisions regarding CalAm's diversions from the Carmel River and pumping from the Seaside Groundwater Basin. The results of ongoing conservation efforts are considered in the sizing of the proposed project and nothing about the MPWSP would decrease those efforts to conserve water.
City of Seaside (coastal zone and inland areas)	Seaside General Plan	Sewer Collection and Treatment	New Transmission Main; ASR Conveyance Pipeline; ASR Pump-to-Waste Pipeline; ASR Recirculation Pipeline; Terminal Reservoir	Policy LU-6.1: Maintain the existing sewer system to provide a high level of service to community neighborhoods.	This policy is intended to maintain a high level of service for the sewer system.	<u>Potentially inconsistent:</u> Pipeline installation could temporarily impact sewer service. This issue is addressed in Impact 4.13-1 below.

**TABLE 4.13-2 (Continued)
 APPLICABLE REGIONAL AND LOCAL PLANS AND POLICIES RELEVANT TO PUBLIC SERVICES AND UTILITIES**

Project Planning Region	Applicable Plan	Plan Element/Section	Project Component(s)	Specific Plan, Policy, or Ordinance	Relationship to Avoiding or Mitigating a Significant Environmental Impact	Project Consistency with Plan, Policy, or Ordinance
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Public Services	Source Water Pipeline, MPWSP Desalination Plant, new Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipelines, Carmel Valley Pump Station, and Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy PS-2.1: Coordination among, and consolidation with, those public water service providers drawing from a common water table to prevent overdrawing the water table is encouraged.	This policy is intended to prevent overdrawing of the aquifers.	<u>Consistent:</u> The proposed project is being planned in coordination with public water service providers in the region and includes measures to prevent overdrawing the water table.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Public Services	Source Water Pipeline, MPWSP Desalination Plant, new Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipeline, Carmel Valley Pump Station, and Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy PS-5.5: The County shall promote waste diversion and recycling and waste energy recovery.	This policy is intended to reduce waste.	<u>Consistent:</u> The proposed project would be required to comply with State and local regulations that require waste diversion and recycling.
County of Monterey (coastal zone and inland areas)	Monterey County General Plan	Public Services	Source Water Pipeline, MPWSP Desalination Plant, new Desalinated Water Pipeline, Brine Discharge Pipeline, Pipeline to CSIP Pond, Castroville Pipeline, Carmel Valley Pump Station, and Main System-Hidden Hills and Ryan Ranch-Bishop Interconnection Improvements	Policy PS-13.2: All new utility lines shall be placed underground, unless determined not to be feasible by the Director of the Resource Management Agency.	This policy is intended to minimize visual and other adverse effects of above-ground utility lines.	<u>Consistent:</u> The proposed project includes underground water conveyance pipelines. New underground and aboveground powerlines would be constructed between existing powerlines in the area and the proposed project facilities. It is anticipated that most, if not all, of the new powerlines would be constructed underground.
County of Monterey (inland areas)	North County Area Plan	Public Services	Castroville Pipeline	NC-5.2: Water development projects that can offer a viable water supply to water-deficient areas in North County shall be a high priority.	This policy is intended to provide a viable water supply to water deficient parts of North County	<u>Consistent:</u> The proposed project contributes water supplies to the Castroville Seawater Intrusion Project, therefore, it would provide a viable water supply to water deficient parts of North County.

SOURCES: City of Marina, 2006; City of Seaside, 2004; Monterey County, 1985, 2010.

4.13.3 Evaluation Criteria

Implementation of the proposed project would have a significant impact related to public services and utilities if it would:

- Disrupt operations or require relocation of regional or local utilities;
- Result in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire and police protection, schools, parks, or other public facilities;
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have insufficient water supply available to serve the project from existing entitlements and resources or require new or expanded water supply resources or entitlements;
- Result in a determination by the wastewater treatment provider that it has inadequate capacity, including treatment and/or outfall capacity, to accommodate the project's projected demand;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Be out of compliance with federal, state, and local statutes and regulations related to solid waste; or
- Generate wastewater flows that would increase the corrosion of the existing MRWPCA outfall and diffuser.

4.13.4 Approach to Analysis

Streets and trails through the project area function as underground utility corridors. Several impacts of the MPWSP related to public services and utilities stem from the potential for project construction to directly impact utilities and utility services. Therefore, the analysis of project impacts in Sections 4.13.5.1 and 4.13.5.2, below, focus on impacts on utilities, although potential impacts related to public services are also addressed.

This analysis uses the California Department of Transportation (Caltrans) policy in the Caltrans Project Development Procedures Manual (Caltrans, 1999) to identify "high risk" utilities that would pose a greater risk to workers and the public should an accident occur during construction, and which therefore warrant special consideration. Pursuant to the policy, high risk utilities include pipelines carrying petroleum products, oxygen, chlorine, toxic or flammable gases;

natural gas in pipelines greater than 6 inches nominal pipe diameter or with normal operating pressures greater than 60 pounds per square inch gauge; and underground electric supply lines, conductors, or cables that have a potential to ground more than 300 volts, either directly buried or in duct or conduit, and which do not have effectively grounded metal shields or sheaths (Caltrans, 1999).

4.13.5 Direct and Indirect Effects of the Proposed Project

Due to the nature of the proposed project, the following criteria are not addressed in the impact analysis sections for the reasons described below:

Result in the need for new or physically altered governmental facilities. During the 30 month construction period, up to 380 construction workers would be employed at the various construction sites, depending on the phase of construction and the construction activities taking place. It is expected that construction workers could come from any part of the region. While it is possible that some workers might temporarily relocate from other areas, the proposed project would not substantially increase the local population. During project construction, incidents requiring law enforcement, fire protection, or emergency services could occur; however, any temporary increase in incidents would not exceed the capacity of local and/or regional service providers to a degree that requires new or expanded facilities. Any temporary increase in the local population during project construction would be negligible and could be accommodated by existing service providers. Therefore, construction of the proposed project would not result in impacts related to the need for new or physically altered governmental facilities in order to maintain existing levels of public services, and no impacts on public services would occur.

The proposed project would not permanently increase the local population. Operation and maintenance activities would require approximately 25 to 30 permanent employees and would not substantially increase the demand for public services, including fire and police protection, libraries, schools, hospitals, or other services. Therefore, no impacts related to public services would occur during project operations. Because there would be no construction or operational impacts, the criterion related to the need for new or modified governmental facilities is not applicable to the project and is not discussed further. The issues of population and housing are discussed in Section 4.19 Population and Housing. The potential impact related to impaired emergency access during construction is addressed under Impact 4.9-4 in Section 4.9, Traffic and Transportation.

Require or result in the construction of new water or wastewater treatment facilities or the expansion of existing facilities, the construction of which could cause significant environmental effects. As described in Chapter 3, Description of the Proposed Project, the MPWSP would develop a new water supply to replace current supplies that are legally constrained. It would not increase volumes of wastewater requiring treatment, and no new or expanded wastewater treatment facilities would result. The construction of water-related facilities, including the MPWSP Desalination Plant, is the subject of this EIR/EIS. Other sections in this Chapter 4, Environmental Setting (Affected Environment), Impacts, and Mitigation Measures discuss the potential impacts and identify mitigation measures associated with these proposed facilities.

Require or result in the construction of new stormwater drainage facilities or the expansion of existing facilities, the construction of which could cause significant

environmental effects. The potential for the proposed project to change drainage patterns and increase stormwater runoff is addressed in Section 4.3, Surface Water Hydrology and Water Quality (see Impacts 4.3-7 and 4.3-8). That analysis indicates that, due to the negligible increase in impervious surfaces associated with the proposed aboveground facilities, the proposed project would have a less than significant impact associated with potential changes in drainage patterns and the rate and amount of surface runoff. As a result, the proposed project would not require or result in the need for new or expanded stormwater drainage facilities. No impact would result and this impact is not discussed further.

Have insufficient water supply available to serve the project or require new or expanded water supply resources or entitlements. Project implementation would generate approximately 25 to 30 permanent jobs in the Monterey District service area. The proposed project would not construct new housing, nor would it substantially increase the number of permanent workers in the area. No substantial changes in water demand or water distribution would result. Further, the purpose of the MPWSP is to provide a new potable water supply source to serve the CalAm Monterey District service area and the implementation of this new water supply is the subject of this EIR/EIS. Therefore, this criterion is not applicable to the project and is not discussed further in this section. Refer to Chapter 2, Water Demand, Supplies, and Water Rights for a discussion of water rights and Section 4.4, Groundwater Resources, for an analysis of the proposed project’s effects on existing groundwater users in the Seaside Groundwater Basin and the Salinas Valley Groundwater Basin.

Table 4.13-3 summarizes the MPWSP’s impacts and significance determinations related to public services and utilities.

**TABLE 4.13-3
 SUMMARY OF IMPACTS – PUBLIC SERVICES AND UTILITIES**

Impacts	Significance Determinations
Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.	LSM
Impact 4.13-2: Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during construction.	LSM
Impact 4.13-3: Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during operations.	LS
Impact 4.13-4: 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.	LSM
Impact 4.13-5: Increased corrosion of the MRWPCA outfall and diffuser as a result of brine discharges associated with project operations.	LSM
Impact 4.13-C: Cumulative impacts related to public services and utilities.	LSM

NOTES:
 LS = Less than Significant impact, no mitigation proposed
 LSM = Less than Significant impact with Mitigation

4.13.5.1 Construction Impacts

Impact 4.13-1: Disrupt or relocate regional or local utilities during construction. (*Less than Significant with Mitigation*)

All Project Facilities

Construction of the MPWSP could damage or interfere with existing water, sewer, stormwater drainage, natural gas, electric, or communication utility service lines. Construction could require the permanent relocation of these utility lines, potentially interrupting service if the relocation could not be avoided. Numerous public utilities of varying sizes are present in the project area.

Streets and roads typically serve as utility corridors, increasing the potential for project pipelines to interfere with existing utilities. As such, overhead utility lines of various sizes are likely to be located along or across several project components. Overhead utility poles and lines could be susceptible to accidental damage from the movement of large construction equipment and vehicles throughout the project area. Trenching, excavation, and pipeline installation are the activities most likely to result in planned or accidental service disruptions, as the proposed pipeline alignments would probably cross multiple underground utilities. In most cases, service disruptions would be temporary and typically would not exceed 1 day. The proposed pipeline alignments could cross stormwater pipes, culverts, natural gas lines, sewer lines, and water pipelines.

Accidental rupture of or damage to utility lines during project construction could temporarily disrupt utility services and, in the case of high-risk utilities (also referred to as high priority subsurface installations), such as high-pressure gas pipelines, could result in significant safety hazards for construction workers. For these reasons, impacts on existing utilities and utility services during project construction would be potentially significant. However, the impact would be reduced to a less-than-significant level with implementation of **Mitigation Measures 4.13-1a (Locate and Confirm Utility Lines)**, **4.13-1b (Coordinate Final Construction Plans with Affected Utilities)**, **4.13-1c (Safeguard Employees from Potential Accidents Related to Underground Utilities)**, **4.13-1d (Emergency Response Plan)**, **4.13-1e (Notify Local Fire Departments)**, and **4.13-1f (Ensure Prompt Reconnection of Utilities)**. These mitigation measures would require the construction contractor(s) to: confirm the location of existing utilities and mark the confirmed locations accurately on the final construction drawings; work with utility service providers to minimize the risk of damage to existing utility lines and ensure prompt reconnection of service in the event of a service disruption; take special precautions when working near high-risk utility lines, including tailgate meetings with contractor staff on days when work will occur near high risk (high priority) utilities; clearly outline the procedures to follow in the event of a leak or explosion; and immediately notify local fire departments of any damage to high-risk utility lines.

Consistency with Regulatory Requirements

In addition to the physical impacts described above, as noted in Section 4.13.2, Regulatory Framework, construction of certain components of the MPWSP could conflict with applicable regulatory requirements related to public services and utilities. As noted in **Table 4.13-2**, the new

Transmission Main, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, ASR Recirculation Pipeline, and Terminal Reservoir would potentially conflict with the Seaside General Plan Policy L-U6.1 which intends to maintain a high level of sewer system service to its community. CalAm and its construction contractors shall implement **Mitigation Measures 4.13-1a (Locate and Confirm Utility Lines)**, **4.13-1b (Coordinate Final Construction Plans with Affected Utilities)**, and **4.13-1f (Ensure Prompt Reconnection of Utilities)** which would resolve any potential conflicts with the aforementioned regulatory requirement.

In addition, construction of the MPWSP would potentially conflict with California's Utility Notification Requirements (Government Code Section 4216 et seq.) which intends to prevent excavations from damaging or rupturing underground utilities, including high priority subsurface installations. CalAm and its construction contractors shall implement **Mitigation Measures 4.13-1a (Locate and Confirm Utility Lines)**, **4.13-1b (Coordinate Final Construction Plans with Affected Utilities)**, **4.13-1c (Safeguard Employees from Potential Accidents Related to Underground Utilities)**, and **4.13-1d (Emergency Response Plan)** which would resolve any potential conflicts with the aforementioned regulatory requirements.

Impact Conclusion

This impact would be significant for all project components but would be reduced to a less-than-significant level with implementation of **Mitigation Measures 4.13-1a** through **4.13-1f**.

Mitigation Measures

Mitigation Measure 4.13-1a applies to all project components.

Mitigation Measure 4.13-1a: Locate and Confirm Utility Lines.

Before excavation begins, CalAm or its contractor(s) shall locate all overhead and underground utility lines (such as natural gas, electricity, sewage, telephone, fuel, and water lines) that are reasonably expected to be encountered during excavation. When a project excavation is within the approximate location of a subsurface utility, CalAm or its contractor shall determine the exact location of the underground utility by safe and acceptable means, including the use of hand tools and modern techniques. Information regarding the size, color, and location of existing utilities shall be confirmed before construction activities begin. These utilities shall be highlighted on all construction drawings.

Mitigation Measure 4.13-1b applies to all project components.

Mitigation Measure 4.13-1b: Coordinate Final Construction Plans with Affected Utilities.

CalAm or its contractor(s) shall coordinate final construction plans, schedule, and specifications with affected utilities. Arrangements shall be made with these entities regarding the appropriate protection, relocation, or temporary disconnection of services. If any interruption of service is required, CalAm or its contractor(s) shall notify residents and businesses in the project corridor of any planned utility service disruption at least 2 working days and up to 14 calendar days in advance, in conformance with county and state standards.

Mitigation Measure 4.13-1c applies to all project components.

Mitigation Measure 4.13-1c: Safeguard Employees from Potential Accidents Related to Underground Utilities.

When any excavation is open, the construction contractor(s) shall protect, support, or remove underground utilities as necessary to safeguard employees.

The contractor(s) shall be required to provide weekly updates to CalAm and construction workers regarding the planned excavations for the upcoming week, and to specify when construction will occur near a high-priority utility (i.e., pipelines carrying petroleum products, oxygen, chlorine, or toxic or flammable gases; natural gas pipelines greater than 6 inches in diameter or with normal operating pressures greater than 60 pounds per square inch gauge; and underground electric supply lines, conductors, or cables that have a potential to ground more than 300 volts that do not have effectively grounded sheaths). Construction managers shall hold regular tailgate meetings with construction staff on days when work near high-priority utilities will occur to review all safety measures regarding such excavations, including measures identified in the Mitigation Monitoring and Reporting Program and in construction specifications—. The contractor shall designate a qualified Health and Safety Officer who shall specify a safe distance to work near high-priority utilities. Excavation near such utility lines shall not be authorized until the designated Health and Safety Officer confirms and documents in the construction records that: (1) the line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device; and (2) the location was verified by hand by the construction contractor.

Mitigation Measure 4.13-1d applies to all project components.

Mitigation Measure 4.13-1d: Emergency Response Plan.

Before commencement of construction, CalAm or its contractor(s) shall develop an emergency response plan that outlines procedures to follow in the event of a leak or explosion and submit a copy to the CPUC and MBNMS. The emergency response plan shall identify the names and phone numbers of staff at the potentially affected utilities that would be available 24 hours per day in the event that construction activities cause damage to or rupture of a high-risk utility. The plan shall also detail emergency response protocols, including notification, inspection, and evacuation procedures; any equipment and vendors necessary to respond to an emergency (such as an alarm system); and routine inspection guidelines.

Mitigation Measure 4.13-1e applies to all project components.

Mitigation Measure 4.13-1e: Notify Local Fire Departments.

CalAm or its contractor(s) shall notify local fire departments in advance of any time work that is to be performed in close proximity to a gas utility line, or any time damage to a gas utility line results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.

Mitigation Measure 4.13-1f applies to all project components.

Mitigation Measure 4.13-1f: Ensure Prompt Reconnection of Utilities.

CalAm or its contractor(s) shall promptly contact utility providers to reconnect any disconnected utility lines as soon as it is safe to do so.

Impact 4.13-2: Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during construction. (*Less than Significant with Mitigation*)

All Project Facilities

Construction of the proposed project would generate approximately 25,110 cubic yards (37,665 tons) of excess spoils and construction materials that would require transport out of the project area, such as sand, soil, and asphalt. Due to the economic value of clean excavated soil and the cost of landfill disposal, it is expected that much of the excavated materials would be diverted for reuse. Nevertheless, this analysis conservatively assumes that all excess spoils and construction debris would be disposed of at the Monterey Peninsula Landfill.

The Monterey Peninsula Landfill is permitted to receive 3,500 tons of waste per day. The landfill has an estimated remaining capacity of 48,560,000 cubic yards and an expected site life of approximately 100 years (CalRecycle, 2016). According to the Monterey Regional Waste Management District, the landfill receives an average of approximately 300,000 tons per year, or less than 1,000 tons per day (MRWMD, 2016).

Based on the assumption that excess spoils and construction debris would be hauled to the landfill Monday through Friday over the 30-month construction duration, project construction could generate up to 59 tons per day of materials requiring disposal. Even under this worst-case scenario, the waste generated by project construction, in combination with the landfill's average acceptance rate of less than 1,000 tons per day, would be well below the landfill's permitted daily acceptance rate of 3,500 tons. The total amount of excess spoils and construction debris generated by the project represents approximately 0.05 percent of the landfill's remaining capacity. Therefore, 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 amount of waste by 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 could conflict with county and local diversion goals and policies, and could adversely affect the jurisdictions' waste diversion rates.

As discussed in Section 4.13.2, Regulatory Framework, the California Integrated Waste Management Act of 1989 requires all California cities and counties to implement programs to reduce, recycle, and compost at least 50 percent of waste and the Monterey County Integrated Waste Management Plan has incorporated provisions of the California Green Building Standards Code, calling for non-residential projects to recycle and/or salvage for reuse of at least 50 percent of

nonhazardous construction and demolition waste and that 100 percent of trees, stumps, rocks, and associated vegetation and soil from land clearing be reused or recycled (unless contaminated with disease or pest infestation).

Failure of CalAm's construction contractor(s) to reuse or recycle excavation materials and other construction waste generated during MPWSP construction would thus conflict with the County's Integrated Waste Management Plan policies, and could also adversely affect the state-mandated diversion rates of the jurisdictions in which construction activities would be located; this would be a significant impact.

This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure 4.13-2 (Construction Waste Reduction and Recycling Plan)**. This measure would require CalAm's construction contractor(s) to prepare and implement a plan to divert recoverable materials from landfills.

Impact Conclusion

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 amount of construction waste would not exceed or substantially deplete the landfill capacity. However, disposal and management of wastes generated during project construction could be out of compliance with state and local regulations and policies calling for the diversion of construction waste from landfill disposal, a significant impact. The impact would be mitigated to a less-than-significant level for all project facilities with implementation of **Mitigation Measure 4.13-2 (Construction Waste Reduction and Recycling Plan)**.

Mitigation Measure

Mitigation Measure 4.13-2 applies to all project components.

Mitigation Measure 4.13-2: Construction Waste Reduction and Recycling Plan.

The construction contractor(s) shall prepare and implement a construction waste reduction and recycling plan identifying the types of debris the project will generate and the manner in which those waste streams will be handled. In accordance with the California Integrated Waste Management Act of 1989, the plan shall emphasize source reduction measures, followed by recycling and composting methods, to ensure that construction and demolition waste generated by the project is managed consistent with applicable statutes and regulations. In accordance with the California Green Building Standards Code and local regulations, the plan shall specify that all trees, stumps, rocks, and associated vegetation and soils, and 50 percent of all other nonhazardous construction and demolition waste, be diverted from landfill disposal. The plan shall be prepared in coordination with the Monterey Regional Waste Management District and be consistent with Monterey County's Integrated Waste Management Plan. Upon project completion, CalAm shall collect the receipts from the contractor(s) and submit them to the CPUC as documentation that the waste reduction, recycling, and diversion goals have been met.

4.13.5.2 Operational and Facility Siting Impacts

Impact 4.13-3: Exceed landfill capacity or be out of compliance with federal, state, and local statutes and regulations related to solid waste during operations. (*Less than Significant*)

MPWSP Desalination Plant

Operation of the MPWSP Desalination Plant would produce approximately 20,000 pounds of residual solid waste per day through the desalination process. This waste would be dewatered onsite, resulting in approximately 5 cubic yards per day (or 7.5 tons) of solids requiring disposal at the Monterey Peninsula Landfill. The solids would contain naturally occurring organic and inorganic matter from the raw seawater, iron precipitated from coagulation during the pretreatment process, and low concentrations of other chemicals used in the treatment process. The solids would be tested prior to landfill disposal to ensure they meet nonhazardous waste disposal criteria. There are no known opportunities for reusing or recycling these solids, so diverting them from landfill disposal is not an option. Because the landfill operates 6 days per week, the 52.5 tons of resulting cake generated per week by the desalination process would result in a daily disposal rate of approximately 8.75 tons (i.e., assuming disposal 6 days per week). The administrative activities at the plant would generate nominal amounts of typical office wastes.

The Monterey Peninsula Landfill is permitted to accept up to 3,500 tons per day but, on average, receives less than 1,000 tons per day (CalRecycle, 2016; MRWMD, 2016); therefore, the landfill could accept the 8.75 tons of waste generated by the MPWSP Desalination Plant without exceeding its permitted daily tonnage or depleting substantial long-term capacity. As a result, operation of the proposed MPWSP Desalination Plant would have a less-than-significant impact related to landfill capacity and solid waste disposal.

ASR Pump-to-Waste System

Maintenance of the ASR Pump-to-Waste System is expected to generate approximately 240 pounds (less than 1 ton) per year of sediment that enters the wells when the water is injected, or from the surrounding soil. This material would be taken to the Monterey Regional Waste Management District's materials recovery facility for recycling and reuse. Therefore, no impacts related to landfill capacity and solid waste disposal are expected from operation of the proposed ASR Pump-to-Waste System.

All Other Proposed Facilities

All other proposed project components (subsurface slant wells, conveyance pipelines, storage facilities, pump stations, the interconnections with Highway 68 satellite systems and other ASR-related facilities) would have limited potential to generate waste during facility operations and maintenance, and any waste generated at these facilities would be nominal. Impacts associated with disposal of solid waste produced at these facilities would be less than significant.

Impact Conclusion

MPWSP Desalination Plant operations would generate solid waste that would be routinely disposed of at the Monterey Peninsula Landfill. There are no known opportunities for reusing or recycling these solids, but the landfill could accept the waste without exceeding its permitted daily tonnage or substantially depleting long-term capacity. Maintenance 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. 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.

Mitigation Measures

None proposed.

Impact 4.13-4: 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. (*Less than Significant with Mitigation*)

Exceed Wastewater Treatment Requirements

As discussed in Chapter 3, Description of the Proposed Project, brine generated during the desalination process at the MPWSP Desalination Plant would be discharged to Monterey Bay through the MRWPCA's existing ocean outfall and diffuser. During certain times of the year, particularly during the non-irrigation (wet) season, the brine stream would be blended with treated wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant prior to discharge. The availability of wastewater effluent for blending with the brine is limited during the dry season (irrigation season) and the brine could be discharged without dilution for extended periods (see **Table 4.13-4**). The *Discharge Requirements for the Monterey Regional Water Pollution Control Agency Treatment Plant* [Order No. R3-2014-0013, NPDES Permit No. CA0048551], which regulate discharges from the outfall, would be amended before the MPWSP Desalination Plant starts operating to incorporate the "brine only" and combined discharges. As described in Impacts 4.3-4 and 4.3-5 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. With implementation of the MPWSP, certain constituent concentrations, as discussed in Section 4.3.5.2 Operational and Facility Siting Impacts and **Appendix D3** (Trussel, 2016), could become elevated under several assessed discharge scenarios to a level that is close to the Ocean Plan standard. Additionally, due to gaps in the available water quality data, a compliance determination could not be made for ten individual constituents and consequently, it must be conservatively assumed that an exceedance of Ocean Plan water quality objectives could occur as a result of operational discharges.

**TABLE 4.13-4
BRINE STREAM AND TREATED WASTEWATER EFFLUENT FLOWS
THROUGH THE MRWPCA OUTFALL AND DIFFUSER**

	Average Monthly Flows (mgd)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Brine Stream from MPWSP Desalination Plant	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98
Treated Wastewater Effluent from MRWPCA ^a	19.78	18.41	14.68	7.02	2.40	1.89	0.90	1.03	2.79	9.89	17.98	19.27
Combined Discharge	33.76	32.39	28.66	21.00	16.38	15.87	14.88	15.01	16.77	23.87	31.96	33.25

NOTES:

^a Based on average monthly effluent discharges for the years 1998 through 2012.

SOURCES: RBF Consulting, 2013; MRWPCA, 2013.

Mitigation Measures 4.3-4 (Operational Discharge Monitoring, Analysis, Reporting, and Compliance) and Mitigation Measure 4.3-5 (Implement Protocols to Avoid Exceeding Water Quality Objectives) are prescribed to monitor, report and reduce the water quality impact associated with potential exceedances of the Ocean Plan water quality objective to a less-than-significant level. Mitigation Measure 4.3-4 requires CalAm to implement a comprehensive Monitoring and Mitigation Plan consistent with the requirements of the Ocean Plan (described in detail in Section 4.3.2.2) that would set forth appropriate response thresholds and corrective actions that would be required if the acquired data indicated deleterious effects on receiving water quality or marine biological resources from the proposed MPWSP operational discharges. Mitigation Measure 4.3-5 would require data gathering to determine baseline conditions and compliance with Ocean Plan water quality objectives and would involve employing design features and/or operational measures to achieve the required minimum dilution of the discharge at the edge of the ZID to ensure compliance with Ocean Plan water quality objectives.

Wastewater Treatment Plant and Outfall Capacity

The only wastewater generated during project operations that would require treatment at the MRWPCA Regional Wastewater Treatment Plant is wastewater from bathrooms at the MPWSP Desalination Plant. 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 approximately 750 gallons per day, which would have a negligible impact on the MRWPCA treatment capacity of 29.6 mgd and discharge capacity of 81.2 mgd. None of the treatment processes at the MPWSP Desalination Plant site and none of the other proposed project facilities located elsewhere would generate wastewater during operations that would require treatment at the MRWPCA Regional Wastewater Treatment Plant. Therefore, project operations would not exceed wastewater treatment capacity.

The existing 2.1-mile-long, 60-inch-diameter MRWPCA outfall pipeline terminates at a 1,100-foot-long diffuser resting above the ocean floor at approximately 90 to 110 feet below sea level. The

diffuser is equipped with 172 ports (129 ports are currently open and 43 are closed), each 2 inches in diameter and spaced 8 feet apart. Depending on the number of closed ports, the outfall and diffuser have a physical discharge capacity of between 66.5 and 94.6 mgd (Trussell Technologies, 2012). The outfall and diffuser are permitted to discharge up to 81.2 mgd in accordance with the *Waste Discharge Requirements for the Monterey Regional Water Pollution Control Agency Treatment Plant* (Order No. R3-2014-0013, NPDES Permit No. CA0048551) (RWQCB, 2014).

MRWPCA currently utilizes the existing ocean outfall and diffuser to discharge secondary treated wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant to Monterey Bay. **Table 4.13-4** shows existing average monthly wastewater flows through the MRWPCA outfall and diffuser based on average monthly effluent discharges for the years 1998 through 2012. As shown, the volume of treated wastewater effluent varies throughout the year, with the highest flows occurring during the non-irrigation season (November through March). The lowest flows occur during the irrigation season (April through October) when a large portion of the secondary wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant is diverted to the Salinas Valley Reclamation Project's tertiary treatment facility for additional advanced treatment and subsequently used for crop irrigation as part of the CSIP.

The MPWSP Desalination Plant would generate approximately 13.98 mgd of brine (including 0.4 mgd of decanted backwash effluent) that would be discharged through the MRWPCA's existing ocean outfall and diffuser. The amount of treated wastewater effluent available for blending with the brine stream would be variable throughout the year, and the brine stream could be discharged with minimal dilution for extended periods. As shown in **Table 4.13-4**, based on average monthly flows, both the "brine only" flows and the combined discharges would remain below the MRWPCA's permitted discharge capacity of 81.2 mgd throughout the year. An outfall capacity evaluation conducted in 2012 (Trussell Technologies, 2012) indicates that even under the worst-case conditions when additional ports are closed and outfall capacity is reduced to 41.1 mgd, the outfall has sufficient capacity to accommodate the additional brine stream.

Maximum instantaneous flows measured in the outfall between 1998 and 2012 (MRWPCA, 2013) ranged from 40.4 mgd to 59.9 mgd. This data indicates 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, assuming the existing outfall capacity of 81.2 mgd. However, as discussed in Section 3.2.2.5 Brine Storage and Disposal of Chapter 3, Description of Proposed Project, the brine stream, when combined with instantaneous peak flows of wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant, could exceed the capacity of the outfall and diffuser during large storm events. Based on previous studies prepared by Trussell Technologies that assumed up to 23.7 mgd of brine would be discharged through the outfall (compared to approximately 14 mgd under the MPWSP) and outfall capacity is reduced to 41.4 mgd, six hours of storage capacity would provide more than adequate storage during periods of peak effluent flow (Trussell Technologies, 2012). The 3-million-gallon brine storage basin described in Section 3.2.2.5 has sufficient capacity to detain flows from approximately 6 hours of desalination plant operations. Thus, the impact related to outfall capacity would be less than significant.

Impact Conclusion

As described in Impacts 4.3-4 and 4.3-5 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. However, certain constituents would become elevated under several assessed discharge scenarios. **Mitigation Measures 4.3-4 and 4.3-5** would reduce the water quality impact associated with potential exceedances of the Ocean Plan water quality objectives to a less-than-significant level by requiring CalAm to conduct water quality assessments prior to MPWSP operation and to implement a comprehensive Monitoring and Reporting Plan that is consistent with the Ocean Plan requirements.

None of the treatment processes at the MPWSP Desalination Plant site and none of the other proposed project facilities would generate wastewater during operations that would require treatment at the MRWPCA Regional Wastewater Treatment Plant. 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.

Mitigation Measures

Mitigation Measures 4.3-4 and 4.3-5 apply to MPWSP Desalination Plant operations.

Mitigation Measure 4.3-4: Operational Discharge Monitoring, Analysis, Reporting, and Compliance.

Mitigation Measure 4.3-5: Implement Protocols to Avoid Exceeding Water Quality Objectives.

(See Section 4.3, Surface Water Hydrology and Water Quality, for the description.)

Impact 4.13-5: Increased corrosion of the MRWPCA outfall and diffuser as a result of brine discharge associated with project operations. (*Less than Significant with Mitigation*)

As discussed above under Impact 4.13-4, the MRWPCA utilizes the existing ocean outfall and diffuser to discharge secondary treated wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant into Monterey Bay. The existing 60-inch-diameter MRWPCA outfall pipeline includes a 13,000-foot-long unlined segment on land (starting at the regional wastewater plant at about elevation +100), and a 9,880-foot-long unlined segment offshore. An unlined reinforced concrete junction box connects the land and offshore outfall segments and is marked as Station 0+00 (E2 Consulting Engineering, 2015). With implementation of the MPWSP, the brine produced during the reverse osmosis process at the MPWSP Desalination Plant would be conveyed to a brine mixing facility at the inland end of the land segment of the outfall, which is located at the MRWPCA Regional Wastewater Treatment Plant. The brine would flow through the land segment, junction box, and the offshore segment prior to exiting at

the diffuser. An evaluation of the existing condition of the junction box and offshore segment and the potential for increased corrosion due to the addition of brine discharge was completed by EC Consulting Engineering (2015) and is summarized below.

MRWPCA Ocean Outfall – Offshore Segment

The assessment of the existing condition of the junction box and offshore outfall segment included field exploration, sampling, and laboratory testing of the samples. The laboratory results found the concrete strength to be excellent (over 7,500 pounds per square inch [psi] compared to designed compressive strength of 4,000 psi). The assessment concluded that, although chloride levels in the concrete samples were nine times the threshold for corrosion, the anaerobic environment present in the continuously exposed offshore segment of the outfall is the reason corrosion is not evident (i.e., there is no oxygen available for oxidation) (E2 Consulting Engineering, 2015).

The MPWSP Desalination Plant would generate approximately 14 mgd of brine (including 0.4 mgd of decanted waste effluent) that would be discharged through the MRWPCA's existing ocean outfall and diffuser. The salinity of the brine stream is estimated to range between approximately 57 and 58 parts per thousand (ppt), compared to the salinity of seawater in Monterey Bay, which ranges from 33.1 to 34.2 ppt (see Section 4.3, Surface Water Hydrology and Water Quality, for additional discussion regarding water quality impacts). The “brine only” discharges and combined discharges of brine and wastewater effluent would expose submerged metals and concrete in the outfall and diffuser to high salinity water.

The assessment concluded that the existing outfall pipeline could accept the brine stream from the MPWSP Desalination Plant without serious deterioration and that the reinforcing steel in the pipe would continue to be protected from corrosion by the anaerobic environment of its immersion, which precludes the introduction of oxygen into the steel/concrete interface. Even with the increased chloride concentrations from the brine, the corrosion of the outfall would continue to be controlled by the availability, or lack, of oxygen. The outfall pipe could be expected to live up to its original intended life expectancy provided oxygen is not introduced into the discharges and anaerobic conditions remain.

However, some turbulence might be expected to occur in the existing junction drop structure at the shoreline and approximately the first 100 feet of the offshore pipeline. This turbulence could introduce oxygen into the system and increase the potential for corrosion, which is considered a significant impact. The assessment recommended that the junction box and 100-foot-long segment of pipeline be lined to ensure any oxygen introduced by turbulence does not cause corrosion (E2 Consulting Engineering, 2015). Therefore, with implementation of **Mitigation Measure 4.13-5a (Installation of Protective Lining, Periodic Inspections, and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall)**, which require the application of a protective epoxy coating along the junction box and first 100 feet of the offshore outfall pipeline and periodic inspections of the outfall thereafter, the impact would be reduced to a less-than-significant level.

MRWPCA Ocean Outfall – Land Segment

An evaluation of the 13,000-foot-long land segment similar to the evaluation that was conducted for the offshore segment is planned but has not yet been conducted (E2 Consulting Engineering, 2015). However, due to the aerobic conditions in the land segment, it is anticipated that the proposed discharges of brine from the MPWSP Desalination Plant would accelerate corrosion of the land segment, and this would be considered a significant impact. However, with implementation of **Mitigation Measure 4.13-5b (Assess Land Segment of MRWPCA Ocean Outfall and Install Protective Lining, If Needed)**, which requires assessment of the full length land segment and, if needed, the phased application of a protective epoxy coating along all or part of the 13,000-foot-long land segment, the impact would be reduced to a less-than-significant level. Thereafter, periodic inspections of the land segment would be performed to ensure the continued integrity of the segment.

Mitigation Measures

Mitigation Measure 4.13-5a applies to the MRWPCA outfall.

Mitigation Measure 4.13-5a: Installation of Protective Lining, Periodic Inspections and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall.

To protect the offshore segment of the MRWPCA ocean outfall from corrosion, CalAm shall enter into an agreement with MRWPCA and line the junction box and 100-foot-long segment of outfall pipeline with a marine epoxy coating, Raven 405 or equivalent, sprayed to a minimum thickness of 80 millimeters wet film.

Installation of the lining shall occur during the irrigation season (April through September), when nearly all of the wastewater effluent is diverted to the Salinas Valley Reclamation Plant. As recommended in the assessment of the offshore segment (EC Consulting Engineering, 2015), the junction box and initial portion of the offshore segment shall be temporarily plugged at the landward end using a large football shaped balloon inserted just beyond Land Outfall Station 1+00. The junction box (Station 0+00) and portion of the segment shall then be dewatered by pumping all water out on the landward side of Station 1+100. The dewatered portion of the segment and junction box shall be allowed to dry for 48 hours. The interior of the junction box and offshore segment shall then be sprayed with the epoxy coating. Once the coating is applied, the balloon plug shall be deflated and removed so that the outfall can be brought back into operation.

Installation of the epoxy lining shall take no longer than 7 to 10 days. The minimal amount of MRWPCA effluent that must be diverted while the outfall segment is plugged for epoxy installation shall be collected upstream of the balloon plug via large hose or flexible pipe. This hose or pipe will transfer the effluent up through the junction box and out to an in-place gutter located forward of the junction box and facing the beach. Prior to installation of the lining, CalAm shall obtain approval from the RWQCB for the temporary diversion of the treated effluent to the in-place gutter.

CalAm shall enter into an agreement with MRWPCA and perform periodic inspections of the offshore portion of the MRWPCA outfall and diffuser. Annual inspections shall occur for the first three years after the MPWSP Desalination Plant is brought online. Thereafter, the offshore portion of the outfall shall be inspected every five years.

During each inspection, photo documentation shall be provided for all areas of inspections, regardless of findings, to provide for photographic comparison over time. All inspections shall include documentation of the thickness of scaling, any exposure or corrosion of reinforcing steel, significant cracking or spalling of concrete, and any pitting of metals. Any necessary repairs to the outfall and/or diffuser shall be identified and performed.

Mitigation Measure 4.13-5b applies to the MRWPCA outfall.

Mitigation Measure 4.13-5b: Assess Land Segment of MRWPCA Ocean Outfall and Install Protective Lining, If Needed.

Prior to operation of the MPWSP Desalination Plant, CalAm shall coordinate with MRWPCA to assess the land segment of the ocean outfall. The evaluation shall include field exploration, sampling, and laboratory testing, and shall assess the existing condition of the land segment as well as the potential for brine discharges from the MPWSP Desalination Plant to accelerate corrosion of the land segment. If the existing condition of part or all of the land segment is such that brine discharge would accelerate corrosion and substantially decrease the life expectancy of the outfall due to corrosion of the land segment, CalAm shall enter into an agreement with MRWPCA and line the part or all of the land segment with a protective epoxy coating similar to that prescribed in **Mitigation Measure 4.13-5a (Installation of Protective Lining, Periodic Inspections, and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall)**.

Installation of any needed epoxy lining shall occur during the irrigation season (April through September) when nearly all of the wastewater effluent flows are diverted to the Salinas Valley Reclamation Facility. For purposes of epoxy installation, the interior of the land segment may be accessed at six locations along the segment (three manholes at separate locations within the MRWPCA treatment plant, an air relief in the middle of Armstrong Ranch, an inspection manhole just west of the bike trail west of Del Monte Boulevard and the junction structure near the ocean). To avoid impacts on special status or sensitive species at or between these access locations and in the staging area, site surveys will be completed by qualified biologists to identify any special status or sensitive species. If special status or sensitive species are identified, implementation of the following mitigation measures from Chapter 4.6 Terrestrial Biological Resources would ensure that impacts on special status or sensitive species at the site are reduced to a less-than-significant level: **Mitigation Measures 4.6-1a (Retain a Lead Biologist to Oversee Implementation of Protective Measures), 4.6-1b (Construction Worker Environmental Awareness Training and Education Program), 4.6-1c (General Avoidance and Minimization Measures), 4.6-1e (Avoidance and Minimization Measures for Special-status Plants), Measure 4.6-1f (Avoidance and Minimization Measures for Smith's Blue Butterfly), Measure 4.6-1g (Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard), Measure 4.6-1h (Avoidance and Minimization Measures for Western Burrowing Owl), Mitigation Measure 4.6-1i (Avoidance and Minimization Measures for Nesting Birds), Mitigation Measure 4.6-1j (Avoidance and Minimization Measures for American Badger), Mitigation Measure 4.6-1l (Avoidance and Minimization Measures for Special-status Bats)**. Any epoxy needed shall be installed in phases using the nearest interior access point. The small amount of effluent flowing through the portion of the land segment to be epoxied shall be plugged and dewatered as described below. The plugged portion of the segment shall be allowed to dry for 48 hours and then the epoxy lining shall be installed. Installation of epoxy lining in a given portion of the land segment shall not exceed

7 to 10 days, and shall not exceed 4 to 6 months within the entire land segment, if necessary (and thus would be completed within the April through September irrigation season).

When any needed epoxy lining is being installed in a portion of the land segment, the small amount of effluent flowing through the affected portion shall be diverted by inserting a hose or flexible pipe into the interior access point above the affected portion and running that hose or pipe along the surface to discharge into the next downstream access point. The final access point shall be the junction box at the head of the offshore segment of the ocean outfall. The surface hose or pipe will act as a temporary bridge along the land segment carrying effluent from above the plugged portion of the segment where epoxy lining is being installed to the next access point downstream of the work area. However, CalAm shall obtain all necessary RWQCB approvals and permits to temporarily run the hose along the ground surface.

4.13.5.3 Secondary Impacts of Mitigation Measure 4.13-5a

The lining of the outfall junction box and 100-foot-long segment of ocean outfall pipeline with a marine epoxy coating as directed by **Mitigation Measure 4.13-5a (Installation of Protective Lining, Periodic Inspections and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall)** could result in the accidental release of hazardous materials into the marine environment. As discussed in Section 4.3, Surface Water Hydrology and Water Quality, the construction contractor would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for construction activities according to the NPDES General Construction Permit requirements. The SWPPP would list the hazardous materials proposed for use during construction and describe spill prevention measures and protocols for responding immediately to spills. As described further in Hazardous and Hazardous Materials Section 4.7.5.1, through compliance with applicable hazardous materials storage, disposal, and permitting regulations, hazardous materials impacts associated with potential releases would be less than significant.

4.13.5.4 Secondary Impacts of Mitigation Measure 4.13-5b

Potential secondary impacts associated with the implementation of **Mitigation Measure 4.13-5b (Assess Land Segment of MRWPCA Ocean Outfall and Install Protective Lining, if Needed)** are discussed below. To dewater and to dry segments of the land outfall for epoxy application, utility crews would access three manholes on MRWPCA property, an air relief access point on Armstrong Ranch, (the land to the west of the MRWPCA property), a manhole just west of the Monterey Peninsula Recreational Trail, and a junction structure near the ocean. Secondary impacts would be associated with possible disturbances to roadway, recreational trail, farmland, ranchland, and terrestrial resources as effluent diversion pipelines are temporarily installed either above ground or trenched.

To spray epoxy on the segments between the MRWPCA property and the junction structure during the different application phases, utility crews would likely impact the following:

- **Roadways:**
 - Utility crews would cut a one- to three-foot-wide trench across the MRWPCA access road to extend the diversion pipe onto Armstrong Ranch/farmland. Traffic flow on this minor two-lane road would be maintained through means of flaggers controlling

alternate one-way traffic flow on the available one-lane width (implemented as part of Mitigation Measure 4.9-1, Traffic Control and Safety Assurance Plan). Two-way traffic flow would be restored after road work is complete through the use of steel traffic plates. Once work that is dependent upon this diversion pipe is complete, the trench would be reopened, with traffic flow again being maintained using the above-described alternate one-way traffic flow system until the trench is filled and repaved. This impact on traffic flow would be reduced to less than significant with Mitigation Measure 4.9-1.

- Utility crews would cut a one- to three-foot-wide trench across Del Monte. On two-lane Del Monte Boulevard, traffic flow would be maintained through means of flaggers controlling alternate one-way traffic flow on the available one-lane width (implemented as part of Mitigation Measure 4.9-1, Traffic Control and Safety Assurance Plan). Two-way traffic flow would be restored after road work is complete through the use of steel traffic plates. Once work that is dependent upon this diversion pipe is complete, the trench would be reopened, with traffic flow again being maintained using the above-described alternate one-way traffic flow system until the trench is filled and repaved. This impact on traffic flow would be reduced to less than significant with Mitigation Measure 4.9-1.
- Utility crews would cut a one- to three-foot-wide trench across Lapis Road. Lapis Road would be temporarily closed just north of the CEMEX access road, and traffic would be detoured to Del Monte Boulevard via the southern intersection of Lapis Road / Del Monte Boulevard (implemented as part of Mitigation Measure 4.9-1, Traffic Control and Safety Assurance Plan) while crews cut a trench, install the pipe, and cover with steel plates. When work dependent upon the diversion pipe is complete, Lapis Road would again be temporarily closed and detoured in the same fashion above while the trench is reopened and filled and repaved. This impact on traffic flow would be reduced to less than significant with Mitigation Measure 4.9-1.

- **Recreational trail:**

- Utility crews would cut a one- to three-foot-wide trench across the Monterey Peninsula Recreational Trail and backfill once the pipe has been installed. Once utility work is complete, the trench would be reopened, the pipe would be removed, and the surface would be returned to original condition. Construction would be of short duration and temporary, access will be provided around the work area and the impact would be less than significant.

- **Farmland:**

- Utility crews would run a temporary diversion pipe above ground along a 0.25 mile stretch of the eastern portion of Armstrong Ranch that is currently cultivated in strawberries. The pipe would avoid existing row crops and work would be coordinated with agricultural operations. Any impacts would be temporary and less than significant.

- **Armstrong Ranch:**

- Utility crews would run temporary diversion pipe across Armstrong Ranch and create a work staging area for underground crews at the air relief access point. Utility trucks would access Armstrong Ranch via unpaved roads that traverse the property. To access the air relief point from the nearest unpaved road, utility trucks would need to drive off-road approximately 450 feet along the scarred surface above the buried outfall in order to set the staging area for underground crews. To install the diversion

pipe for the different phases, utility trucks would drive off-road along the scarred surface on Armstrong Ranch from the farmland pipeline connection to the point nearest the manhole west of the bike trail. Impacts on special status or sensitive species would be reduced to less than significant with Mitigation Measure 4.13-5b.

4.13.6 Cumulative Effects of the Proposed Project

The cumulative scenario and cumulative impacts methodology are described in Section 4.1.7. Table 4.1-2 lists potential cumulative projects.

Impact 4.13-C: Cumulative impacts related to public services and utilities (*Less than Significant with Mitigation*)

As discussed in Section 4.13.5, the MPWSP would have no impact on public services. Accordingly, the MPWSP would not cause or contribute to cumulative impacts related to public services.

The geographic scope for cumulative utilities systems impacts consists of the service areas of utility providers for wastewater treatment, water treatment, stormwater drainage, water supply, and solid waste landfill needs, as defined in Section 4.13.1. For example, the geographic scope for landfill capacity and compliance with solid waste statutes and regulations considerations encompasses Monterey County. Cumulatively significant impacts on utility systems could result if the incremental effects of the MPWSP during the construction and/or operations phases combined with effects from one or more of the cumulative projects listed in **Table 4.1-2** that would result in a cumulatively considerable impact.

4.13.6.1 Cumulative Construction Impacts

Damage to or Disruption of Existing Utilities and Relocation of Utilities

A cumulatively significant impact on utilities could result if the incremental impacts of the MPWSP combined with those of one or more of the cumulative projects would cause utility damage, extended periods of utility service disruptions, or multiple disruptions within a short timeframe. As described in Impact 4.13-1, construction of the MPWSP could damage or interfere with existing water, sewer, stormwater drainage, natural gas, electric, or communication utility service lines. MPWSP construction activities could involve accidental damage, temporary disconnection, or planned relocation of utility lines, each of which could interrupt service.

As discussed in Impact 4.13-1, the MPWSP's potential utility impacts would be reduced to a less-than-significant level with implementation of **Mitigation Measures 4.13-1a (Confirm Utility Line Information)**, **4.13-1b (Coordinate Final Construction Plans with Affected Utilities)**, **4.13-1c (Safeguard Employees from Potential Accidents Related to Underground Utilities)**, **4.13-1d (Emergency Response Plan)**, **4.13-1e (Notify Local Fire Departments)**, and **4.13-1f (Ensure Prompt Reconnection of Utilities)**.

Cumulative projects that could cause utility impacts similar to those described for the MPWSP include those identified in **Table 4.1-2** involving future construction. Due to the localized nature of utilities, most potential impacts would likely be limited to construction areas or utility distribution subareas, rather than affecting the entire project area or utility service area. The incremental contribution of the residual (post-mitigation) effects of the MPWSP to a cumulative impact would not be substantial because most potential effects would be related to pipeline construction. Given the rate of pipeline installation (150 to 250 feet per day), MPWSP construction activities that have the potential to disrupt utility service would not occur in the vicinity of other cumulative projects for extended periods of time such that prolonged or frequent disruption of service would occur in the vicinity (or utility service subarea) of cumulative projects with potential to cause similar effects. Therefore, after implementation of mitigation measures described above, the MPWSP's residual effects would be minimal and would not have a cumulatively considerable contribution to significant cumulative utility service impacts (*less than significant with mitigation*).

Landfill Capacity and Compliance with Solid Waste Statutes

A significant cumulative impact would occur if the incremental impacts of the MPWSP combined with those of one or more of the cumulative projects would generate waste volumes that exceed available landfill capacity, or if the handling of those materials would violate applicable solid waste statutes. As discussed in Impact 4.13-2, construction of the MPWSP would generate an estimated 25,110 cubic yards (or 37,665 tons) of excess spoils and construction debris. Conservatively assuming all MPWSP construction waste would be disposed at the Monterey Peninsula Landfill, the MPWSP would represent approximately 0.05 percent of the landfill's remaining capacity. Construction could be inconsistent with the Monterey County Integrated Waste Management Plan because the total volume of construction wastes and excess spoils could be landfilled if not recycled properly. Because the Integrated Waste Management Plan is intended to address countywide diversion goals, being inconsistent with this plan could result in a cumulatively considerable contribution to a potentially significant cumulative impact. Most of the cumulative projects listed in **Table 4.1-2** would also generate construction-related waste. Given the landfill's finite capacity and the potential for waste diversion, and conservatively assuming all cumulative projects would dispose of solid waste at the Monterey Peninsula Landfill, a cumulatively significant effect could occur if cumulative projects generating solid waste did not adhere to State requirements for diversion of solid waste from landfills (see Section 4.13.2, Regulatory Framework, for additional details). However, such policies were put in place to address cumulative impacts; therefore it is unlikely that the projects in **Table 4.1-2** would result in significant adverse cumulative impacts on landfill capacity during construction. As described above, the proposed project would be required to implement **Mitigation Measure 4.13-2 (Construction Waste Reduction and Recycling Plan)**. Implementation of this measure would ensure consistency with the plan, and the residual impact therefore would not be cumulatively considerable (*less than significant with mitigation*).

4.13.6.2 Cumulative Impacts during Project Operations

Landfill Capacity and Compliance with Solid Waste Statutes

As discussed in Impact 4.13-3, operation of the MPWSP Desalination Plant would generate approximately 5 cubic yards (or 7.5 tons) of sludge or “cake” per day that would be disposed of at the Monterey Peninsula Landfill. As described in Section 4.13, this would result in an average daily disposal of 8.75 tons over the six days per week the landfill operates. This volume would represent approximately 0.35 percent of the facility’s available daily receiving capacity of 2,500 tons (the difference between permitted capacity and current actual daily intake) and would continue throughout the project’s lifetime. Over the assumed 40-year operating lifetime of the MPWSP, disposal of cake would represent 0.02 percent of the landfill’s current remaining lifetime capacity. There are no known opportunities for reusing or recycling these solids, so diverting them from landfill disposal is not an option. As discussed previously, many of the cumulative projects identified in **Table 4.1-2** would also generate wastes. Given the relatively small effect of the MPWSP waste disposal on daily and absolute landfill receiving capacity, and the comparatively large contribution anticipated by cumulative projects, the MPWSP would not contribute considerably to a cumulatively significant landfill capacity impact (*less than significant*).

Generate Wastewater Flows that would Exceed Wastewater Treatment Requirements or the Capacity of the Existing Ocean Outfall

A significant cumulative impact would occur if the effects of the MPWSP combined with those of the cumulative projects would cause effluent flows to exceed the MRWPCA outfall’s capacity or exceed wastewater treatment requirements. One of the projects in **Table 4.1-2** that would have the potential to contribute to cumulative wastewater flows is the Regional Urban Water Augmentation Project (RUWAP) Desalination Element. The effects of the MPWSP brine stream combined with the RUWAP Desalination Element brine stream were considered in the evaluation of the proposed project since the RUWAP flows would be included in the range of flows from the MRWPCA. Implementation of **Mitigation Measures 4.3-4** and **4.3-5** would manage the water quality impact associated with potential exceedances of the Ocean Plan water quality objectives by requiring CalAm to conduct water quality assessments prior to MPWSP implementation and to implement a comprehensive Monitoring and Reporting Plan that is consistent with the Ocean Plan requirements, to ensure this cumulative impact would be less than significant, and the project’s contribution is not cumulatively considerable (*less than significant with mitigation*).

The MPWSP’s brine stream would add approximately 14 mgd to the MRWPCA outfall’s discharge. Projects identified in **Table 4.1-2** that would increase residential, commercial, office, or institutional development would generate new wastewater streams, many of which would be routed to the MRWPCA’s Regional Wastewater Treatment Plant. Much of these flows would be recycled for irrigation purposes during the dry season, but could become part of the wastewater stream during the wet season. In addition, the RUWAP Desalination Element, if it was implemented, would increase brine flows through the MRWPCA outfall and diffuser. Under normal operating conditions, additional cumulative project wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant, when combined with that of the MPWSP and

RUWAP brine streams, would not cause discharges to exceed the capacity of the existing ocean outfall except under extreme wet weather conditions (Trussell Technologies, 2012). The implementation of the RUWAP Recycled Water Element would deliver up to 1,400 afy of recycled water, and therefore, would reduce the volume of effluent that is discharged through the outfall and diffuser.

In addition, as discussed in Section 3.2.2.5, Brine Storage and Disposal of Chapter 3, Description of the Proposed Project, in the event that the brine stream combined with instantaneous peak flows of wastewater effluent from the MRWPCA Regional Wastewater Treatment Plant were to exceed the capacity of the outfall and diffuser during large storm events, CalAm would detain the MPWSP brine stream at the proposed brine storage basin until sufficient capacity is available in the outfall for discharge. The proposed 3-million-gallon brine storage basin has sufficient capacity to detain flows from approximately 6 hours of desalination plant operations, which represents the holding time necessary to avoid an exceedance during a worst-case scenario in which outfall capacity is reduced to approximately 41 mgd during instantaneous peak flows (Trussell Technologies, 2012). With detention, the MPWSP effluent would not substantially contribute to outfall capacity constraints. The effect of the MPWSP effluent on ocean outfall capacity impacts would not be cumulatively considerable (*less than significant*).

Increased Corrosion of the MRWPCA Outfall

A cumulatively significant impact would occur if the effects of the MPWSP combined with those of the cumulative projects would cause a substantial increase in corrosion of the MRWPCA outfall. As discussed in Impact 4.13-5, lack of oxygen at the offshore segment of the outfall would protect the outfall from increased corrosion and scaling due to anaerobic conditions. However, the land segment of the outfall, the existing junction box at the shoreline, and the first 100 feet of the offshore pipeline could experience aerobic conditions which would increase the potential for corrosion of these facilities, resulting in a significant impact. As discussed in Impact 4.13-5, it is assumed that the amount of treated wastewater effluent available for blending with (i.e., diluting) the brine stream would be highly variable throughout the year, and the brine stream could be discharged with little or no dilution for extended periods. **Mitigation Measure 4.13-5a (Installation of Protective Lining, Periodic Inspections, and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall)** requires a baseline inspection of the outfall and diffuser prior to MPWSP Desalination Plant operation, the application of a protective epoxy coating along the junction box and first 100 feet of the offshore outfall pipeline, annual inspections of the outfall and diffuser, and performance of any necessary corrosion-related repairs. Additionally, **Mitigation Measure 4.13-5b (Assess Land Segment of MRWPCA Ocean Outfall and Install Protective Lining, If Needed)** requires a detailed evaluation of the 13,000-foot-long land segment of the ocean outfall and, if needed, the application of a protective epoxy coating along the land segment.

Only two of the projects in **Table 4.1-2**, the RUWAP Recycled Water Element and the RUWAP Desalination Element, could potentially affect flows that utilize the outfall pipeline or diffuser. The RUWAP Recycled Water Element could reduce the volume of wastewater discharged through the outfall and diffuser during the summer months, while the RUWAP Desalination

Element could increase the volume of brine effluent discharged through the outfall and diffuser. Implementation of either project would result in an increase in the proportion of effluent that is composed of brine.

As noted previously, the analysis in Impact 4.13-5 assumes that the MPWSP brine stream could be discharged without dilution for extended periods since MRWPCA wastewater flows presently vary substantially across seasons. Therefore, MRWPCA wastewater flow reductions resulting from the RUWAP Recycled Water Element would not be expected to affect brine effluent-related corrosion or scaling of the MRWPCA outfall or diffuser beyond that described for the MPWSP. The brine concentration in the RUWAP Desalination Element's effluent would be similar to that of the MPWSP. Although the total volume of brine would increase with the MPWSP and RUWAP Desalination Element, the salinity would not be expected to change substantially. Therefore, the salinity would be close to that described for the proposed project, and may still result in a significant cumulative impact. Implementation of **Mitigation Measures 4.13-5a** and **4.13-5b** would substantially reduce the potential for MPWSP-related corrosion and scaling effects on the outfall and diffuser. The residual potential for MPWSP operations to contribute to cumulative impacts on the MRWPCA outfall or diffuser corrosion would be substantially reduced. Given that cumulative brine concentrations would not be substantially different from that of MPWSP operations alone, the proposed project would not contribute considerably to a cumulative impact involving corrosion of the MRWPCA outfall (*less than significant with mitigation*).

References – Public Services and Utilities

California Department of Resources Recycling and Recovery (CalRecycle), 2016. Facility/Site Summary Details: Monterey Peninsula Landfill (27-AA-0010). Available online at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/27-AA-0010/Detail/>. Accessed April 29, 2016.

California Department of Transportation (CalTrans), 1999. Project Development Procedures Manual, Appendix LL, Utilities [Policy on High and Low Risk Underground Facilities within Highway Rights of Way], July 1, 1999. Available online at: http://www.dot.ca.gov/hq/oppd/pdpm/apdx_word/apdx-ll.doc. Accessed May 2, 2016.

Carmel Area Wastewater District, 2016. Service Area. Available online at: <http://cawd.org/service-area.html>. Accessed May 2, 2016.

Castroville Community Services District (Castroville CSD), 2016a. Water Services. Available online at: www.castrovillecsd.org/water.html. Accessed May 2, 2016.

Castroville Community Services District (Castroville CSD), 2016b. Storm Drain. Available online at: www.castrovillecsd.org/stormdrain.html. Accessed May 2, 2016.

City of Marina, 2006. *City of Marina General Plan*, amended December 31, 2006.

City of Marina, 2016. Fire Department, History. Available online at: <http://cityofmarina.org/index.aspx?NID=222>. Accessed April 29, 2016.

City of Monterey, 2016. Monterey Fire Department History. Available online at: <http://monterey.org/en-us/departments/fire/firedepartmenthistory.aspx>. Accessed April 29, 2016.

City of Seaside, 2004. *Seaside General Plan*. Adopted August 5, 2004.

City of Seaside, 2016. Public Works Department, Water. Available online at: <http://www.ci.seaside.ca.us/index.aspx?page=215>. Accessed April 29, 2016.

E2 Consulting Engineers, 2015. Technical Memorandum: Groundwater Replenishment (GWR) Project Evaluation of Existing Outfall. Prepared for the Monterey Regional Water Pollution Control Agency. Dated March 15, 2015, Revised October 1, 2015.

Marina Coast Water District (MCWD), 2016a. MCWD Water Sources & Treatment. Available online at: http://www.mcwd.org/about_water.html. Accessed April 29, 2016.

Marina Coast Water District (MCWD), 2016b. MCWD Seawater Desalination Facility. Available online at: http://www.mcwd.org/about_water_desalination.html. Accessed April 29, 2016.

Monterey County, 1985. *North County Area Plan*. Adopted on July 2, 1985.

Monterey County, 2010. *2010 Monterey County General Plan*. Adopted October 26, 2010.

Monterey County, 2016. Monterey County, CA: Hospitals. Available online: <http://www.co.monterey.ca.us/visitors/hospitals>. Accessed April 29, 2016.

Monterey County Emergency Medical Services Agency (MCEMSA), 2014. *Emergency Medical Services Plan*. Revised October 2014.

Monterey County Free Libraries (MCFL), 2016. Monterey County Free Libraries website. Available online at: <http://www.co.monterey.ca.us/library/>. Accessed April 29, 2016.

Monterey County Health Department (MCHD), 2012. *Five Year CIWMP Review Report for Monterey County and Its Cities*, prepared by the Monterey County Intergraded Waste Management Task Force.

Monterey County Regional Fire District (MCRFD), 2016. Mission Statement. Available online at: <http://www.mcrfd.org/aboutus.html>. Accessed April 29, 2016.

Monterey Sheriff, 2016. Patrol Division. Available online at: <https://www.montereysheriff.org/patrol/>. Accessed April 29, 2016.

Monterey County Water Resources Agency (MCWRA), 2016. Floodplain Management, National Flood Insurance Program (NFIP). Available online at: http://www.mcwra.co.monterey.ca.us/floodplain_management/fpm_overview.php. Accessed May 2, 2016.

Monterey Peninsula Unified School District (MPUSD), 2016. Our Schools. Available online at: <http://www.mpusd.k12.ca.us/ourschools/>. Accessed April 29, 2016.

- Monterey Regional Waste Management District (MRWMD), 2015. *2015 Annual Report*.
- Monterey Regional Waste Management District (MRWMD), 2016. Monterey Peninsula Landfill. Available online: http://www.mrwmd.org/programsservices/disposal/monterey_peninsulalandfill/. Accessed April 29, 2016.
- Monterey Regional Water Pollution Control Agency (MRWPCA), 2013. 1998 to 2012 Flow data.
- Monterey Regional Water Pollution Control Agency (MRWPCA), 2016a. Areas Served by MRWPCA. Available online at: http://www.mrwPCA.org/about_governance_areas_served.php. Accessed May 2, 2016.
- Monterey Regional Water Pollution Control Agency (MRWPCA), 2016b. Wastewater Conveyance. Available online at: http://www.mrwPCA.org/about_facilities_conveyance.php. Accessed May 2, 2016.
- Monterey Regional Water Pollution Control Agency (MRWPCA), 2016c. Recycled Water. Available online at: http://www.mrwPCA.org/about_facilities_water_recycling.php. Accessed May 2, 2016.
- North County Fire Protection District (NCFPD), 2013. *North County Fire Protection District Map*. Available online at: <http://www.ncfpd.org/Documents/NCFDistMap.pdf>. Accessed April 16, 2013.
- North Monterey County Unified School District (NMCUSD), 2016. Our Schools. Available online: http://www.nmcusd.org/cms/page_view?d=x&piid=&vpid=1357984036072. Accessed April 29, 2016.
- RBF Consulting, 2013. Memorandum: Recommended Capacity for the Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant. January 7, 2013.
- Regional Water Quality Control Board (RWQCB), Central Coast Region, 2014. Order No. R3-2014-0013, NPDES Permit No. CA0048551, Renewal of Waste Discharge Requirements for Monterey Regional Water Pollution Control Agency Wastewater Treatment System for Monterey Regional Water Pollution Control Agency (MRWPCA), Monterey County, 2014.
- Seaside Fire Department, 2014. *2014 Annual Report*. Available online at: <http://www.ci.seaside.ca.us/Modules/ShowDocument.aspx?documentid=10826>. Accessed April 29, 2016.
- Theroux, Michael, 2012. *California AB 341 Legislative Analysis, New Diversion Law Modifies California's Integrated Waste Management Act*. June 2012.
- Trussel Technologies, 2012. Technical Memorandum: MRWPCA Outfall Hydraulic Capacity Analysis. April 18, 2012.
- Trussell Technologies, 2016. Draft Revised Ocean Plan Compliance Assessment for the Monterey Peninsula Water Supply Project and Project Variant. Technical Memorandum, July 2016.
- USA North, 2016. California Excavation Manual. Available online at: www.usanorth.org/CALIFORNIAexcavationman.pdf. Accessed May 3, 2016.

This page intentionally left blank