

ES. EXECUTIVE SUMMARY

Sections	
ES.1 Introduction	ES.6 Alternatives to the Proposed Project
ES.2 Project Background	ES.7 Comparison of Alternatives, Environmentally Superior/Environmentally Preferred Alternative, and NOAA-Preferred Alternative
ES.3 CEQA Project Objectives / NEPA Purpose and Need	ES.8 Areas of Controversy and Issues to be Resolved
ES.4 Public & Agency Involvement	
ES.5 The Proposed Project	

Tables	Figures
ES-1 Alternatives Impact Summary	ES-1 Monterey Peninsula Water Supply Project Overview
ES-2 Summary of Impacts and Mitigation Measures – MPWSP Proposed Project	

ES.1 Introduction

This Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) has been prepared by the California Public Utilities Commission (CPUC) pursuant to the California Environmental Quality Act (CEQA) and Monterey Bay National Marine Sanctuary (Sanctuary or MBNMS) pursuant to the National Environmental Policy Act (NEPA). This EIR/EIS analyzes the potential environmental impacts of the Monterey Peninsula Water Supply Project (MPWSP or proposed project) proposed by the California American Water Company (CalAm). CalAm is proposing the MPWSP to develop water supplies for CalAm’s Monterey District service area (Monterey District). The MPWSP would include a subsurface source water intake system; a desalination plant; a brine discharge system; product water conveyance pipelines, one pump station, storage facilities; and improvements to the existing Seaside Groundwater Basin’s aquifer storage and recovery (ASR) system (see Chapter 3, Description of the Proposed Project).

This EIR/EIS has been prepared in accordance with CEQA (Cal. Pub. Res. Code §21000 et seq.) and the CEQA Guidelines (Cal. Code Regs., Tit. 20, Div. 6, Ch. 3, §15000 et seq.), and with NEPA (42 U.S.C. §4321 et seq.,) and its implementing regulations (40 CFR Parts 1500-1508). For the purposes of this document, the CEQA lead agency for the MPWSP is the CPUC; the NEPA lead agency is MBNMS. This EIR/EIS presents information to understand the potential environmental consequences of the proposed project, proposed permit issuance by MBNMS, and alternatives. Consistent with CEQA and NEPA, this Final EIR/EIS includes responses to all comments received on the Draft EIR/EIS that was published on January 13, 2017, and includes revisions to the Draft EIR/EIS text that were made in response to comments (see Section 1.5.3 for details) as well as Lead Agency-initiated changes.

ES.2 Project Background

CalAm, the project applicant, is a privately owned public water utility that has served the Monterey Peninsula since 1966. CalAm's Monterey District encompasses most of the Monterey Peninsula, including the cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, and Seaside, and the unincorporated areas of Carmel Highlands, Carmel Valley, Pebble Beach, and the Del Monte Forest. Within this service area, CalAm provides water to residential, commercial, industrial, and other customers. The water supply challenges facing CalAm and the Monterey Peninsula are substantial and have been well-documented in a number of venues including the State Water Resources Control Board (SWRCB), the Monterey County Superior Court, the CPUC, and the California Legislature.

In 2004, CalAm filed Application A.04-09-019 seeking a Certificate of Public Convenience and Necessity from the CPUC for the Coastal Water Project. The Coastal Water Project (CWP) was intended to replace existing Carmel River water supplies for the CalAm Monterey District service area that are constrained by legal decisions. In general, the CWP involved the production of desalinated water supplies (using existing intakes at the Moss Landing Power Plant), increasing the yield from the Seaside Groundwater Basin ASR system, and building additional storage and conveyance systems to move the replacement supplies to the existing CalAm distribution system. The CWP was sized to meet existing water demand and did not include supplemental supplies to accommodate growth. On January 30, 2009, the CPUC published a Draft EIR analyzing the environmental impacts of the CWP and two project alternatives—the North Marina Project and the Regional Project. The CPUC published the Coastal Water Project Final EIR (SCH No. 2006101004) in October 2009 and certified the Final EIR in December 2009 (Decision D.09-12-017). A year later, in Decision D.10-12-016, the CPUC approved implementation of the Regional Project alternative. The Coastal Water Project Final EIR is available for review at the CPUC, 505 Van Ness Avenue, San Francisco, California 94102.

Subsequent to approval of the Regional Project, CalAm withdrew its support for the Regional Project in January 2012. As a result, in April 2012, CalAm submitted Application A.12-04-019 to the CPUC for the MPWSP. The MPWSP includes many of the same elements previously analyzed in the CWP EIR; however, key components, including the source water intake system and desalination plant, have been relocated and/or modified under the current proposal. The CPUC issued a Notice of Preparation (NOP) of an EIR for the proposed project on October 10, 2012. Hardcopies of the NOP were mailed to all federal, state, responsible, and trustee agencies involved in approving or funding the project, as well as relevant local agencies and special districts with jurisdiction in the project area. The mailing list also included organizations, members of the public, and local, regional, and state agencies who commented on, or were involved in, the CalAm Coastal Water Project Draft EIR (State Clearinghouse No. 2006101004, concerning the predecessor proposed project to the MPWSP), or who have expressed interest in participating in the CEQA process for the MPWSP. In addition, although not required by CEQA, property owners and occupants of parcels located within 300 feet of proposed project components were identified and sent NOP postcards with information about the project, scoping period, and opportunities for submitting comments. The NOP was also made available at 13 local libraries and was published in local newspapers and legal advertisements. Three scoping meetings were

conducted in the project area in October 2012. A Draft EIR on the MPWSP was issued on April 30, 2015. The MPWSP Draft EIR is available for review at the CPUC, 505 Van Ness Avenue, San Francisco, California. In September 2015, after considering the Draft EIR comments and based on conversations with MBNMS and internal CPUC deliberations, the CPUC Energy Division announced that the April 2015 Draft EIR would be modified and recirculated as a joint EIR/EIS in coordination with MBNMS.

On May 19, 2015, MBNMS received a permit application from CalAm and responded on June 16, 2015, that the agency would initiate a NEPA review for the project. On August 26, 2015, NOAA's Office of National Marine Sanctuaries initiated the NEPA process by issuing a Notice of Intent (NOI) to prepare an EIS for the project (80 FR 51787, August 26, 2015). The NOI solicited input on the issues to be analyzed in depth related to the portion of the proposed project within the Sanctuary's boundaries, and regarding the full spectrum of environmental issues and concerns relating to the scope and content of the EIS. On September 10, 2015, MBNMS held a NEPA scoping meeting for the project; the scoping period closed on October 2, 2015. A summary of EIS scoping comments is provided in Appendix A.

On September 15, 2016, in Decision 16-09-021, the CPUC authorized CalAm to enter into a Water Purchase Agreement, which provides that the Monterey Regional Water Pollution Control Agency (MRWPCA) will sell purified water from its advanced treated Pure Water Monterey Groundwater Replenishment (GWR) Project to the Monterey Peninsula Water Management District (MPWMD), which in turn will sell it to CalAm for extraction and distribution to ratepayers in the Monterey District service area. The GWR Final EIR Project Description is presented in Appendix H.

CPUC Decision 16-09-021 also authorized CalAm to construct the new Monterey Pipeline and Pump Station.

ES.3 CEQA Project Objectives / NEPA Purpose and Need

ES.3.1 Project Objectives

Based on review of information in CalAm's application, the primary, or fundamental, objectives of the proposed MPWSP are to:

1. Develop water supplies for the CalAm Monterey District service area to replace existing Carmel River diversions in excess of CalAm's legal entitlement of 3,376 afy, in accordance with SWRCB Orders 95-10 and 2009-0060;
2. Develop water supplies to enable CalAm to reduce pumping from the Seaside Groundwater Basin from approximately 4,000 to 1,474 afy, consistent with the adjudication of the groundwater basin, with natural yield, and with the improvement of groundwater quality;
3. Provide water supplies to allow CalAm to meet its obligation to pay back the Seaside Groundwater Basin by approximately 700 afy over 25 years as established by the Seaside Groundwater Basin Watermaster;

4. Develop a reliable water supply for the CalAm's Monterey District service area, accounting for the peak month demand of existing customers;
5. Develop a reliable water supply that meets fire flow requirements for public safety;
6. Provide sufficient water supplies to serve existing vacant legal lots of record;
7. Accommodate tourism demand under recovered economic conditions;
8. Minimize energy requirements and greenhouse gas emissions per unit of water delivered; and
9. Minimize project costs and associated water rate increases.

The secondary objectives of the MPWSP are to:

1. Locate key project facilities in areas that are protected against predicted future sea-level rise in a manner that maximizes efficiency for construction and operation and minimizes environmental impacts;
2. Provide sufficient conveyance capacity to accommodate supplemental water supplies that may be developed at some point in the future to meet build out demand in accordance with adopted General Plans; and
3. Improve the ability to convey water to the Monterey Peninsula cities by improving the existing interconnections at satellite water systems and by providing additional pressure to move water over the Segunda Grade.

ES.3.2 MBNMS Purpose and Need

Federal proposed actions consist of the following: 1) authorization of a Coastal Development Permit for CalAm to drill into the submerged lands of MBNMS to install a subsurface seawater intake system; 2) authorization of a Central Coast Regional Water Quality Control Board (RWQCB) issued National Pollutant Discharge Elimination System (NPDES) permit to allow for the discharge of brine into MBNMS via an existing ocean outfall pipe; and 3) issuance of a special use permit to CalAm for the continued presence of a pipeline in MBNMS transporting water to or from a desalination facility.

The purpose of these proposed actions is to authorize otherwise prohibited activities to occur within MBNMS, to ensure that the State and Federal permits and the proposed project comply with MBNMS regulations, and to ensure that MBNMS resources are protected by requiring terms and conditions that may be necessary. The need for MBNMS action is to respond to CalAm's permit and authorization request in accordance with NMSA regulations and to protect sanctuary resources.

ES.4 Public & Agency Involvement

ES.4.1 Public and Agency Involvement

This Final EIR/EIS is a public document for use by the CPUC, MBNMS, other governmental agencies, and the public in identifying and evaluating the potential environmental consequences of the proposed project and proposed federal actions, identifying mitigation measures to lessen or

eliminate adverse impacts, and examining feasible alternatives to the proposed project. It is expected that the CPUC, MBNMS, and other responsible, trustee, and relevant agencies will use this EIR/EIS in deciding whether to approve the MPWSP or any alternative. The analyses contained within this EIR/EIS will be used to determine any necessary regulatory permits, authorizations, or approvals.

The Draft EIR/EIS was published on January 13, 2017 and was circulated to local, state, and federal agencies as well as interested organizations and individuals who wished to review it. Copies of the Draft EIR/EIS were made available at local libraries and water agencies, and it is available for downloading at http://www.cpuc.ca.gov/Environment/info/esa/mpwsp/comms_n_docs.html. Notice of the Draft EIR/EIS availability was also sent directly to every agency, person, or organization that commented on the CPUC's Notice of Preparation (NOP) or the Sanctuary's Notice of Intent (NOI). The publication of the Draft EIR/EIS marked the beginning of a public review period that ran from January 13, 2017 through March 29, 2017. The Lead Agencies held public meetings in the cities of Marina and Seaside on February 15, 2017, and held a public hearing for the receipt of oral and written comments on the Draft EIR/EIS in Carmel-by-the-Sea, on February 16, 2017.

The Lead Agencies received approximately 85 comment letters, plus 2 form letter submissions (Form Letter 1 consists of 149 one-page letters, and Form Letter 2 consists of 791 one- or two-page letters), sent through mail, hand-delivery, or email, as well as 18 oral comments received at the public hearing. Chapter 8, Draft EIR/EIS Responses to Comments, includes a list of all agencies, organizations, and individuals that submitted comments, copies of all comment letters and the transcript of oral comments, and responses to all comments.

Following circulation of the Draft EIR/EIS and incorporation of public comments and responses to comments (see Chapter 8), this Final EIR/EIS is being published by the CPUC and submitted into the formal record of the Commission's Certificate of Public Convenience and Necessity proceeding (A.12-04-019). Concurrently, NOAA is submitting the Final EIR/EIS to the USEPA and publishing a Notice of Availability in the Federal Register.

ES.4.2 Final EIR/EIS and Revisions Made to the Draft EIR/EIS

Public and agency comments on the Draft EIR/EIS did not require changes in the conclusions of the Draft EIR/EIS that resulted in any new or substantially more severe impacts for the proposed project. Furthermore, there were no changes to the proposed project or to the circumstances under which the proposed project will be undertaken or significant new information relevant to environmental concerns that indicate the proposed project would result in impacts more adverse than disclosed in the Draft EIR/EIS or that additional feasible mitigation measures or alternatives warrant consideration. The following key changes have been incorporated into the Final EIR/EIS, consistent with minor modifications made to the proposed project, other clarifications requested by comments on the Draft EIR/EIS, and Lead Agency-initiated changes:

- Removal of references to, and analysis of, the Terminal Reservoir, which CalAm has indicated is not needed for project operation and no longer proposes as part of the project;

- Addition of the Brine Mixing Box to the description and analysis of the proposed Brine Disposal Pipeline by request of CalAm and Monterey Regional Water Pollution Control Agency (MRWPCA);
- Inclusion of additional brine discharge dilution modeling and Ocean Plan Compliance modeling in Section 4.3, Surface Water Hydrology and Water Quality, by request of MRWPCA (also see Appendices D1 and D3);
- Inclusion of information from recent geophysical studies of seawater intrusion in the Salinas Valley Groundwater Basin (SVGB) – Electrical Resistivity Tomography (ERT) and Airborne Electromagnetics (AEM) – in Section 4.4.1.4, Groundwater Resources;
- Expansion of the SVGB Return Water/Ocean Water Percentage discussion in Section 4.4.1.5, Groundwater Resources;
- Clarification of the capture zone, the cone of depression, aquifer responses to the Deep Aquifers and consistency of the proposed project with the Sustainable Groundwater Management Act (SGMA) in Section 4.4.5.2;
- Revision of Applicant Proposed Measure 4.4-3, Groundwater Monitoring and Avoidance of Well Damage;
- Revision of several mitigation measures to clarify performance standards and provide additional details for implementation;
- Revision of Mitigation Measure 4.11-1 in Section 4.11, Greenhouse Gas Emissions, to require net zero indirect emissions from electricity use during operation (reducing the significance of all impacts related to greenhouse gas emissions from significant and unavoidable to less than significant with mitigation);
- Revision of Impact and Mitigation Measure 4.13-5 in Section 4.13, Public Services and Utilities, to address potential corrosion of the existing outfall as a result of MPWSP brine discharge, including WEKO seal clamp replacement inside the existing offshore segment of the outfall;
- Identification of a NOAA-preferred alternative in Section 5.6, in addition to the environmentally superior/environmentally preferred alternative;
- Revision to Section 6.4, Project Consistency with MBNMS Desalination Guidelines, to include alternatives described in Section 5.4 in the assessment of project conformity with guidelines for desalination plants in MBNMS (see Table 6.4-1); and
- Addition of the Hydrogeologic Working Group’s Hydrogeologic Investigation Technical Report as Appendix E3.

Other minor corrections, clarifications, and explanations have been made throughout the document.

ES.4.3 Use of this EIR/EIS in Decision Making

The assigned CPUC Administrative Law Judges (ALJs) will review the Final EIR/EIS and submit a proposed decision to the Commission concerning certification of the EIR/EIS and approval of the MPWSP. If the CPUC certifies the Final EIR/EIS, it will then decide whether or not to grant the Certificate of Public Convenience and Necessity for the MPWSP, as proposed or modified. In

addition to environmental impacts addressed during the CEQA process, the Certificate of Public Convenience and Necessity process will consider any other issues that have been established in the record of the proceeding, including but not limited to economic issues, social impacts, specific routing and alignments, and the need for the project.

This Final EIR/EIS will be used by MBNMS, along with other information developed in the formal record (including interagency consultations and/or permits in compliance with the Endangered Species Act, Marine Mammal Protection Act, Magnuson Stevens Act, and the National Historic Preservation Act, among others), to decide whether or not: to authorize a Coastal Development Permit to be issued by the City of Marina under its certified Local Coastal Program, to authorize a NPDES permit to be issued by the Central Coast RWQCB, and to issue a special use permit to CalAm for the continued presence of a pipeline conveying seawater to or from a desalination facility. If MBNMS moves forward with a final action, a 30-day mandatory waiting period will occur after issuance of the Final EIR/EIS, and then MBNMS may issue its Record of Decision (ROD). The decision-making authority for the ROD under NEPA is NOAA's Assistant Administrator for the National Ocean Service (NOAA Administrative Order 216-6A; NOAA, 2016).

ES.5 The Proposed Project

ES.5.1 Description of the Proposed Project

The project area extends approximately 18 miles, from the town of Castroville in the north to the City of Carmel-by-the-Sea in the south (see **Figure ES-1**). The MPWSP would include a source water intake system, which would consist of 10 subsurface slant wells¹ (eight active and two on standby) extending offshore into the submerged lands of MBNMS and a Source Water Pipeline that would convey the source water from the well sites to the desalination plant. The slant wells would be constructed at the CEMEX sand mining site in the northern coastal area of the City of Marina and would extract 24.1 million gallons per day (mgd) of source water through the seafloor in MBNMS.

A 9.6 million gallons per day (mgd) capacity desalination plant would be constructed in unincorporated Monterey County on Charles Benson Road, northeast of the City of Marina and would produce approximately 10,750 acre-feet per year (afy) of desalinated water. Related facilities would include pretreatment, reverse osmosis (RO), and post-treatment systems; backwash supply and filtered water equalization tanks; treated water storage tanks; chemical feed and storage facilities; brine storage and conveyance facilities; and other associated non-process facilities.

The proposed project would also include improvements to the existing Seaside Groundwater Basin aquifer storage and recovery (ASR) system facilities, which would enable CalAm to inject desalinated product water into the groundwater basin for subsequent extraction and distribution to customers. The expanded ASR system would include two additional injection/extraction wells, the ASR-5 and ASR-6 Wells, and three parallel pipelines, the ASR Conveyance Pipeline, ASR

¹ The existing test slant well would be converted into a permanent well, and nine additional slant wells would be built.

Pump-to-Waste Pipeline, and ASR Recirculation Pipeline, and would improve the reliability of the existing ASR system. The proposed project would also include a pump station in Carmel Valley and about 21 miles of water conveyance pipelines.

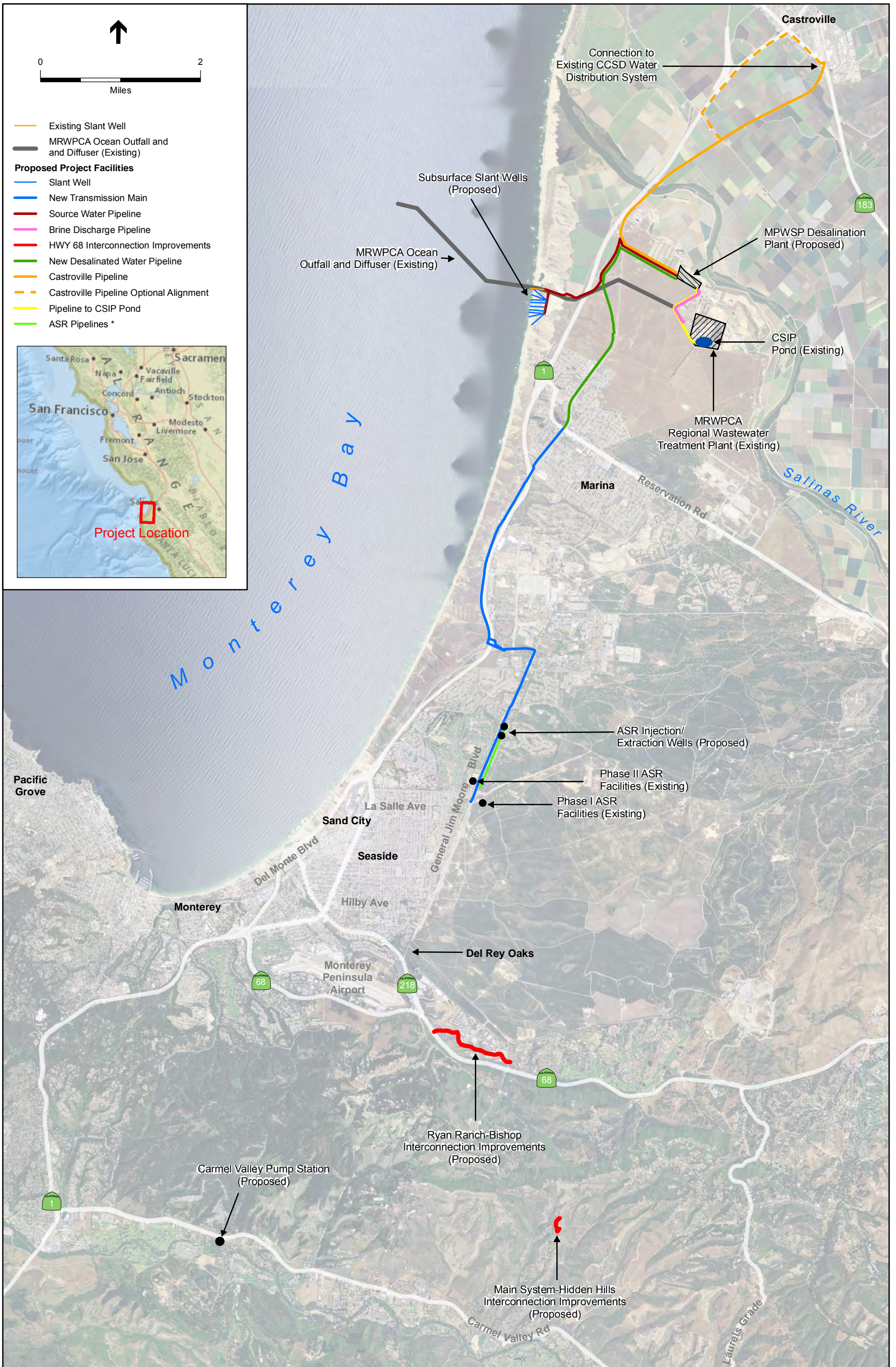
CalAm's application includes two capacity options or build-out scenarios. The first option, addressed in this document as the "Proposed Project," is a 9.6 mgd desalination plant and related facilities designed to meet the full project objectives for a replacement water supply. The second option would meet the project objectives by combining a reduced-capacity desalination plant (6.4 mgd) with a water purchase agreement for 3,500 acre-feet per year (afy) of advanced treated water from another source, the Pure Water Monterey Groundwater Replenishment (GWR) project. This second capacity option in CalAm's application is reflected in Alternative 5a, which is analyzed in Chapter 5, Alternatives Screening and Analysis. The MRWPCA certified the Final EIR and approved the GWR Project in October 2015; the GWR Project is described in Section 4.1 of Chapter 4, Environmental Setting (Affected Environment), Impacts, and Mitigation Measures and is one of the projects included in the cumulative scenarios. The GWR Final EIR project description is presented in Appendix H.

To inform the final design of the subsurface slant wells and the MPWSP Desalination Plant treatment system, and to collect geologic and hydrogeologic data needed for permitting the full-scale project, CalAm constructed and operated a test slant well at CEMEX. Construction of the test slant well and operation of the pilot program was covered under separate environmental review.² The test slant well was originally permitted to operate until February 2018, the permit was extended in November 2017 to allow the test slant well to operate intermittently until February 2019, and the test slant well is not part of the proposed project being evaluated in this EIR/EIS; see Section 8.2.11.8. If the MPWSP with subsurface slant wells at CEMEX is not approved and implemented, the test well will be decommissioned.

ES.5.2 Summary of Potential Impacts and Mitigation Measures for Proposed Project

Chapter 4, Environmental Setting (Affected Environment), Impacts, and Mitigation Measures, of this EIR/EIS evaluates the environmental effects of implementing the proposed project and presents mitigation measures that would reduce potentially significant impacts to less than-significant levels, when feasible. Significant impacts may occur relative to: geology and soils; surface water hydrology and water quality; groundwater resources; terrestrial biological resources; hazards and hazardous materials; land use, land use planning and recreation; traffic and transportation; noise and vibration; utilities; aesthetic resources; cultural and paleontological resources; agricultural resources, and; energy resources. All impacts would be reduced to less-than-significant levels through the implementation of mitigation measures, with the exception of impacts relative to terrestrial biology (inconsistency with City of Marina Local Coastal Land Use Plan policy), air quality (during construction), noise (during construction), and indirect impacts

² In October 2014, MBNMS finished its NEPA review of the construction of the test slant well and the operation of the pilot program. In November 2014, the California Coastal Commission completed its review of environmental impacts consistent with CEQA.



NOTE:
 *The ASR Pipelines are the ASR Conveyance Pipeline, the ASR Pump-to-Waste Pipeline, and the ASR Recirculation Pipeline. See Figure 3-9a for the individual pipeline alignments.

205335.01 Monterey Peninsula Water Supply Project

Figure ES-1
 Monterey Peninsula Water Supply Project Overview

SOURCE: ESA, 2016

This page intentionally left blank

from growth. Further, the proposed project may result in significant cumulative impacts when viewed in combination with other past, present, and reasonably foreseeable future projects. The EIR/EIS identifies that with mitigation, the proposed project would not have a considerable contribution to cumulative impacts, and therefore, the project's contribution to cumulative impacts would be less than significant, with the exception of cumulative impacts relative to terrestrial biological resources (inconsistency with the City of Marina Local Coastal Land Use Plan policy during operation), transportation and traffic (during construction), air quality (during construction), noise (during construction), and indirect growth impacts.

ES.6 Alternatives to the Proposed Project

In addition to the proposed project, this EIR/EIS fully evaluates a No Project/No Action alternative, reduced-size alternatives, alternatives with different seawater intake systems, and additional complete desalination project alternatives being proposed by other entities.

ES.6.1 No Project/No Action Alternative

Under the No Project Alternative, the CPUC would not issue a CPCN for the MPWSP or another alternative; MBNMS would not issue authorizations or a special use permit for the components of the project within MBNMS. No new facilities would be constructed and the test slant well would be decommissioned. CalAm would continue to operate its Monterey District facilities in compliance with the 2009 SWRCB Cease and Desist Order (CDO) as amended by SWRCB Order WR 2016-0016 (together referred to herein as the Revised CDO) and the Seaside Groundwater Basin Adjudication.³ This would also benefit riparian species as discussed in SWRCB Order 95-10. Mandatory rationing and conservation measures would likely be implemented. CalAm would purchase and extract 3,500 afy of Pure Water Monterey Groundwater Replenishment (GWR) Project water from the Seaside Groundwater Basin. The only construction related impacts under this alternative would involve the decommissioning of the test slant well. Potential impacts associated with decommissioning would be similar to the impacts associated with construction activities such as mobilization, site clearance, grading, excavation, and other earthmoving activities in the original construction footprint. However, slant well decommissioning would not involve drilling or excavation but would involve cutting and removing a portion of the well casing, which may result in significant but mitigable impacts on terrestrial biological resources, including:

- Special-Status Species. See Impact 4.6-1 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a through 4.6-1g, 4.6-1i, 4.6-1n, 4.6-1p, 4.12-1b, and 4.14-2 would reduce impacts to a less-than-significant level.
- Sensitive natural communities and critical habitat. See Impact 4.6-2 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a through 4.6-1d, 4.6-1n, 4.6-1p, 4.6-2a, and 4.6-2b would reduce impacts to a less-than-significant level.

³ The April 2015 MPWSP Draft EIR included two No Project Alternatives: No Project A was consistent with the CDO at the time; No Action B included an extension of the CDO timeframe. The No Project alternative in this EIR/EIS is consistent with the Revised CDO.

- Introduction or spread of invasive non-native species. See Impact 4.6-5 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a and 4.6-1p would reduce impacts to a less-than-significant level.

ES.6.2 Alternative 1 – Slant Wells at Potrero Road

Under Alternative 1, 10 new subsurface slant wells would be constructed at Potrero Road, rather than at the proposed CEMEX site, the test slant well at CEMEX would be decommissioned, and two new wells would be drilled at the existing ASR system. The desalination plant and brine discharge/outfall facilities would be the same as the proposed project. Conveyance pipelines would be the same as the proposed project, with an additional 5.5 miles of source water pipeline extending to Potrero Road.

ES.6.3 Alternative 2 – Open-Water Intake at Moss Landing

Under Alternative 2, a new screened open-water intake with a 36-inch diameter subsurface intake pipeline would be constructed offshore and southwest of Moss Landing in MBNMS, and the test slant well at CEMEX would be decommissioned. The desalination plant and brine discharge/outfall facilities would be the same as the proposed project and two new wells would be drilled at the existing ASR system. Conveyance pipelines would be the same as the proposed project, with an additional 6.5 miles of source water pipeline extending to Moss Landing.

ES.6.4 Alternative 3 – Monterey Bay Regional Water Project (MBRWP or DeepWater Desal Project)

Under Alternative 3, a new screened open-water intake with two 42-inch diameter subsurface intake pipelines and a 110-foot long x 30-foot wide x 12-foot tall intake structure would be constructed offshore and southwest of Moss Landing in MBNMS, and the test slant well at CEMEX would be decommissioned. The new outfall would consist of two 36-inch diameter subsurface discharge pipelines and a 140-foot L x 10-foot W x 15-foot T discharge structure. The 22 mgd desalination plant and co-located data center would be constructed on a 110-acre site off Dolan Road in Moss Landing. Product water would be delivered to CalAm at Dolan Road and Highway 1 and two new wells would be drilled at the existing ASR system. Conveyance pipelines would be the same as the proposed project, with an additional 6.5 miles of product water pipeline, plus two new product water pipelines totaling 25 additional miles to serve Salinas and Santa Cruz County (31.5 additional miles of pipeline, compared to the proposed project).

ES.6.5 Alternative 4 – People’s Moss Landing Water Desalination Project (People’s Project)

Under Alternative 4, a new screened open-water intake with two 96-inch diameter screened intakes and a 40-inch diameter discharge pipeline would be constructed offshore Moss Landing in MBNMS, and the test slant well at CEMEX would be decommissioned. The new outfall at Moss Landing would be an extension of an existing outfall with a 36-inch diameter pipeline and two 16-inch diameter diffuser ports. The 12 mgd desalination plant would be constructed at the former National Refractories facility in Moss Landing. Product water would be delivered to

CalAm at Dolan Road and Highway 1, with a 6.5 mile pipeline that connects with the proposed project pipelines at Marina and two new wells would be drilled at the existing ASR system.

ES.6.6 Alternative 5a – Reduced Project 6.4 mgd Desalination Plant (Intake Slant Wells at CEMEX)

Under Alternative 5a, fewer slant wells (7) would be constructed at CEMEX compared to the proposed project; the brine discharge/outfall facilities would be the same as the proposed project, and a 6.4 mgd desalination plant would be constructed at the Charles Benson Road site. CalAm would purchase and extract 3,500 afy of GWR Project water from the Seaside Groundwater Basin.

ES.6.7 Alternative 5b – Reduced Project 6.4-mgd Desalination Plant (Intake Slant Wells at Potrero Road)

Under Alternative 5b, fewer slant wells (7) would be constructed at Potrero Road than Alternative 1, and the test slant well at CEMEX would be decommissioned; the brine discharge/outfall facilities would be the same as the proposed project and Alternative 1, and a 6.4 mgd desalination plant would be constructed at the Charles Benson Road site. The conveyance pipelines would be the same as the proposed project, with an additional 5.5 miles of source water pipeline. CalAm would purchase and extract 3,500 afy of GWR Project water from the Seaside Groundwater Basin.

ES.7 Comparison of Alternatives, Environmentally Superior/Environmentally Preferred Alternative, and NOAA-Preferred Alternative

Comparing the results of the analysis of alternatives presented in Chapter 5 (Alternatives Screening and Analysis), with the results of the analysis of the proposed project presented in Chapter 4 (Environmental Setting, Impacts, and Mitigation Measures), provides a basis for identifying the environmentally superior alternative under CEQA and the environmentally preferred alternative under NEPA. **Table ES-1** presents the impact conclusion for each impact statement, for every topical area evaluated, for the proposed project and for all alternatives, and provides a relative impact severity for each alternative (increased, decreased or same) compared to the proposed project; beneficial impacts are highlighted in green.

ES.7.1 Key Impact Differences Between Alternatives

The following discussion summarizes key differences in the significant environmental impacts among the alternatives.

Under the No Project Alternative, although impacts from project construction would be avoided, impacts associated with decommissioning of the test slant well would be similar to the impacts associated with construction activities such as mobilization, site clearance, grading, excavation,

and other earthmoving activities in the original construction footprint. However, slant well decommissioning would not involve drilling or excavation but would involve cutting and removing a portion of the well casing. Under the No Project Alternative, it would not be possible to meet the proposed project objectives; reliance on existing and planned water conservation and recycling programs would continue. The implementation of mandatory rationing and conservation measures would be likely. The lack of water supply would adversely affect the region's economic vitality. The reduction of available water supply by almost 40 percent could lead to water shortages throughout the CalAm Monterey District service area, impacting all economic sectors, including the County's "four pillars" – agriculture, tourism, education, and research – by substantially reducing the reliability of water resources and water infrastructure.

Under the No Project Alternative, current diversions from the Carmel River would continue, consistent with existing conditions in the short-term. However, CalAm would not meet CDO milestones associated with the construction and implementation of the MPWSP. As a result, diversions from the Carmel River would be required to be reduced sooner than under the proposed project and Carmel River flows would be restored by a total of 10,000 acre-feet over the period of October 2018 through 2021. The increases to Carmel River flows under the No Project Alternative would be beneficial to Carmel River steelhead habitat. Since no construction would occur under the No Project Alternative, there would be no impacts on special-status species, such as western snowy plover and Smith's blue butterfly, that would be impacted by the proposed project. However, decommissioning of the test slant well could result in potentially significant but mitigable secondary impacts on terrestrial biological resources, including:

- Special-Status Species. See Impact 4.6-1 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a through 4.6-1g, 4.6-1i, 4.6-1n, 4.6-1p, 4.12-1b, and 4.14-2 would reduce impacts to a less-than-significant level.
- Sensitive natural communities and critical habitat. See Impact 4.6-2 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a through 4.6-1d, 4.6-1n, 4.6-1p, 4.6-2a, and 4.6-2b would reduce impacts to a less-than-significant level.
- Introduction or spread of invasive non-native species. See Impact 4.6-5 in Section 4.6.5.1. Implementation of Mitigation Measures 4.6-1a and 4.6-1p would reduce impacts to a less-than-significant level.

Alternative 2 (Open-Water Intake at Moss Landing), Alternative 3 (DeepWater Desal Project), and Alternative 4 (People's Project) would use screened, open water intakes, which would reduce or avoid several potential proposed project impacts on groundwater because of the absence of slant well pumping for source water, but would result in new significant impacts on marine biological resources. Significant and unavoidable impacts on marine habitat and biological resources would result from the in-water construction of new open water intakes. Operation of screened open-water intakes for all three alternatives would result in impingement and entrainment of marine organisms, resulting in significant long-term direct and indirect effects on marine biological resources within MBNMS in Monterey Bay, even with implementation of mitigation measures.

For Alternative 3 (DeepWater Desal Project) and Alternative 4 (People's Project), operation of a new, brine-only outfall (no co-mingling with wastewater or other diluent flows) could result in

significant and unavoidable water quality impacts from increased levels of salinity and concentrations of certain other constituents. Due to the proximity of live-aboard boats in Moss Landing Harbor, construction activities would result in exposure of more sensitive receptors to substantial pollutant concentrations from construction equipment emissions, resulting in a significant and unavoidable impact. Both of these alternatives would produce more desalinated water than the proposed MPWSP, resulting in more water being available that would remove an impediment to and potentially support increased growth in the three county-region.

Alternative 3 (DeepWater Desal Project) may result in significant and unavoidable impacts from energy use from operation of the co-located data center that would constrain local or regional supplies and require additional capacity. Operation of emergency generators would use large amounts of fuel in a manner that would be unnecessary and wasteful, resulting in a significant and unavoidable impact.

For Alternative 4 (People's Project), construction of the desalination plant could impact (currently unsurveyed) historical resources, resulting in a significant and unavoidable impact. Operation and siting of the intake pumping facilities on top of the existing caisson at the existing shoreline could result in long-term direct effects on coastal erosion and scour processes that could expose adjacent properties to coastal flooding and a change in sediment transport, resulting in potentially significant impacts. In addition, being within a 100-year flood zone could cause long-term direct effects related to redirection of flood flows, resulting in a significant and unavoidable impact. The intake pumping facilities on top of the existing caisson would result in impacts on the visual quality of the shoreline in Moss Landing and interrupt views of MBNMS resources, resulting in potentially significant impacts.

Alternatives 1 and 5b would include operation of the slant wells at Potrero Road (for a 9.6 mgd or a 6.4 mgd desalination plant, respectively). Alternative 5b would lower groundwater levels in the Dune Sands/Perched-A aquifers in the Moss Landing area. Operation of Alternative 1 would additionally lower groundwater levels in the 180- and 400-foot aquifers, thereby capturing groundwater that would have otherwise flowed into Elkhorn Slough. The direct and indirect permanent effects on marine and terrestrial biological resources at Elkhorn Slough from the operation of slant wells at Potrero Road (Alternatives 1 or 5b) and the lowering of groundwater levels would result in significant and unavoidable impacts.

The proposed project and Alternative 5a would not affect Elkhorn Slough; there would be no construction on the seafloor; and impacts on groundwater resources, surface water resources and marine biological resources would be localized and less than significant. The proposed project and Alternative 5a would use an existing outfall and would co-mingle brine with wastewater; they would each meet Ocean Plan Water Quality objectives for salinity within a very short distance; they would avoid impingement and entrainment of marine organisms associated with an open water intake; and with mitigation, they would be consistent with the Ocean Plan and MBNMS Desalination Guidelines. While the proposed slant wells at CEMEX would be inconsistent with the City of Marina's Local Coastal Plan Land Use Plan policy (and thereby would cause a significant and unavoidable impact when considered with the test slant well at the CEMEX site), Coastal Act Section 30260 encourages coastal-dependent industrial uses and provides for resolution of conflicting Coastal Act policies where such development is concerned.

ES.7.2 Environmentally Superior/Environmentally Preferred Alternative and NOAA-Preferred Alternative

This Final EIR/EIS identifies Alternative 5a as the environmentally superior/environmentally preferred alternative, assuming implementation of the GWR Project. Alternative 5a is also the NOAA-preferred alternative. While the combined Alternative 5a and GWR Project would result in a larger physical footprint than the proposed project alone, the pairing of Alternative 5a and the GWR project would result in reduced operational energy use, reduced GHG emissions, and reduced effects on groundwater levels influenced by fewer slant wells and less volume of pumping, compared to the proposed project. The GWR project would also provide water to growers through the Castroville Seawater Intrusion Project that would benefit the groundwater basin. In addition, Alternative 5a paired with the GWR project would be consistent with the 2016 California Action Plan seeking integrated water supply solutions, the Governor's drought proclamations, the CPUC Water Action Plan goal of promoting water infrastructure investment, the Ocean Plan and MBNMS Desalination Guidelines.

ES.8 Areas of Controversy and Issues to be Resolved

Pursuant to Section 15123(b)(1) of the state CEQA Guidelines and NEPA regulations (40 CFR 1502.12), an EIR/EIS shall identify areas of controversy known to the lead agency including issues raised by agencies and the public and the issues to be resolved (including the choice among alternatives and whether or how to mitigate the significant effects).

The following areas of controversy and issues to be resolved were raised through the scoping and public meetings conducted in association with circulation of the NOP and NOI, comments submitted on the 2015 MPWSP Draft EIR, and comments submitted on the 2017 MPWSP Draft EIR/EIS.

- **Demand to be Met by the Proposed Project and Desalination Plant Sizing**

Comments were received advocating that the desalination plant be sized to provide supply to replace the portions of CalAm's existing Carmel River and Seaside Groundwater Basin supplies that have been constrained by legal decisions (in compliance with SWRCB Orders 95-10 and 2016-0016 and the adjudication of the Seaside Groundwater Basin) to meet current service area demand only. Since demand has continued to decline over the past several years, some comments suggest the proposed project should plan to serve a smaller demand of current customers, and suggest that a desalination plant may not even be necessary. Other comments expressed support for sizing the plant to accommodate differing degrees of additional future demand (e.g., demand associated with the development of vacant legal lots of record, demand associated with full general plan buildout, etc.). Chapter 2, Water Demand, Supplies, and Water Rights, discusses existing service area demand and supplies and the level of demand the MPWSP proposes to meet, and Section 6.3, Growth-Inducing Impacts, evaluates the growth inducement potential of the water supply proposed to be provided by the MPWSP that would exceed current customers' demands. In addition, Master Response 13, Demand (Project Need) and Growth, in Section 8.2.13, responds to comments on the Draft EIR/EIS that concerned customer water demand, available water supplies, and growth that could be induced by the proposed MPWSP water supply.

- **Groundwater Modeling, Impacts and Water Rights**

CalAm's proposed use of subsurface slant wells to withdraw source water for the MPWSP Desalination Plant is the subject of two controversies: (1) whether CalAm has the legal right to extract groundwater from the Salinas Valley Groundwater Basin (SVGB); and (2) whether implementation of the MPWSP and operation of the subsurface slant wells would exacerbate seawater intrusion in the SVGB and harm the existing water supply of other users of the SVGB, particularly Marina Coast Water District (MCWD). The proposed subsurface slant wells at CEMEX would be screened in aquifer units of the SVGB that have long been intruded by seawater. Although the subsurface slant wells would draw water (i.e., source water for the MPWSP Desalination Plant) from beneath the ocean floor, a fraction of the source water would be drawn from inland portions of the SVGB; therefore, the source water would at least initially be a combination of brackish groundwater and seawater. After pumping begins, the wells would extract increasing proportions of infiltrating recharge from the ocean. The ocean recharge would gradually replace the ambient groundwater within what is defined as the capture zone, and would move within the capture zone toward the well, but would not advance beyond the capture zone. This EIR/EIS focuses the definitions of groundwater and seawater based on their chemical properties rather than on their location; see Chapter 3 and Section 4.4.

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

The recommendations of the SWRCB have been implemented by a Hydrogeologic Working Group (HWG) comprised of licensed hydrogeologists with pertinent experience in the Monterey Bay region. The HWG was a result of an August 2013 Settlement Agreement between CalAm and 16 parties whereby CalAm agreed their hydrologist and technical team would work with the Salinas Valley Water Coalition's and Monterey County Farm Bureau's assigned hydrogeologists. The HWG developed a work plan in order to reach agreement about the studies, well tests, field work, modeling, monitoring, and other data analyses that is needed to assess and characterize whether and to what extent the proposed operation of the MPWSP may adversely affect the SVGB and the water supply available to legal water users thereof. The resulting hydrogeological study informed the analysis presented in Section 4.4, Groundwater Resources, as well as the corresponding analysis in Chapter 5, Alternatives. Refer to Section 2.6 in Chapter 2, Water Demand, Supplies, and Water Rights, for a discussion of water rights. The workplan and results of the work plan are presented in EIR/EIS Appendix E3.

Furthermore, the groundwater model and results presented in the 2015 Draft EIR have been revised to address questions about the accuracy and credibility of the groundwater modeling work that was the subject of potential conflict of interest comments. The CPUC made the groundwater data files used in the April 2015 Draft EIR available for public review. The CPUC employed the Lawrence Berkeley National Laboratory to conduct an

independent evaluation of that data; the results of that evaluation are provided in Appendix E1. The CPUC hired a new hydrogeologist (HydroFocus) to revise the groundwater model; see Appendix E2. The groundwater analysis from the 2015 Draft EIR has been updated to reflect the results of the new and revised groundwater model.

Similar comments were received on the Draft EIR/EIS with regard to water rights, source water, the HWG, and groundwater modelling. See Master Responses 2, 3, 5, 8, and 12 in Chapter 8 for a full discussion of these issues.

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

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

- **Brine Discharge**

During scoping and evidentiary hearings, many commenters expressed concerns about the proposed discharge of desalination plant brine to Monterey Bay within MBNMS. Comments primarily focused on the potential effect of brine discharges on benthic habitats and the marine environment, including impacts close to the point of discharge as well as longer term impacts at greater distances associated with the migration of the brine plume. In addition, concerns were expressed over the potential for hypoxia to occur near the seabed as a result of proposed MPWSP operational discharges. Hypoxia, or oxygen depletion, is an environmental phenomenon where the concentration of dissolved oxygen in the water column decreases to a level that can no longer support living aquatic organisms.

Concerns were raised about the consistency of MPWSP brine discharges with MBNMS and California Ocean Plan standards and requirements, the effects of combining brine with wastewater effluent, and the reduction of effluent that would be available for use as an alternative water source if effluent was used to dilute brine.

New brine discharge dilution modeling has been performed, resulting in refinements and clarification of the modeling outcomes relative to the Ocean Plan water quality objectives. The direct, indirect, and cumulative effects of brine discharges on water quality are addressed in Chapter 4, Section 4.3, Surface Water Hydrology and Water Quality; the direct, indirect, and cumulative effects of brine discharges on the marine environment are

addressed in Section 4.5, Marine Biological Resources; and the effects of the proposed project on outfall capacity are addressed in Section 4.13, Public Services and Utilities.

- **Alternatives**

While this EIR/EIS evaluates the MPWSP as proposed by CalAm, other parties are pursuing the development of other desalination projects to provide potable water supply to the Monterey Peninsula and beyond. The Monterey Bay Regional Water Project, proposed by DeepWater Desal, LLC, would provide up to 25,000 afy of potable water supply to serve participating communities in the Monterey Bay region, potentially including the Monterey Peninsula, Castroville, Salinas, and parts of Santa Cruz County. The People's Moss Landing Water Desalination Project (People's Project), proposed by Moss Landing Commercial Business Park, LLC, would provide 13,404 afy (11.97 mgd) of potable water supply to serve North Monterey County and the Monterey Peninsula. Chapter 5, Alternatives, presents information on these other desalination projects based on available information, and includes analysis of these projects as alternatives to the proposed MPWSP project. In addition, Master Response 15, Alternative Desalination Projects – Status, Information Sources, and Cumulative Scenario in Section 8.2.15 responds to comments received on the 2017 Draft EIR/EIS and provides clarification on the status of the DeepWater Desal Project and People's Project (to the extent that information is available), and also addresses questions on assumptions used for considering cumulative impacts of these projects.

- **Greenhouse Gas Emissions (GHG) and De-Gassing**

Comments on the 2015 Draft EIR raised concerns about GHG emissions from subsurface intakes and requested that CO₂ degassing from intake water to the atmosphere be analyzed. These issues are addressed in Section 4.11, Greenhouse Gas Emissions. Furthermore, at the time of publication of the 2017 Draft EIR/EIS, it was not possible to substantiate numerically that the GHG emissions, resulting from construction and operation of the proposed project, would be reduced to less than significant level. Since publication, a detailed mitigation strategy was developed that enabled quantification of reductions with sufficient certainty to support the determination of less than significant with mitigation.

- **Coastal Erosion**

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

- **Intake Technologies**

Several state and federal regulatory and permitting agencies (SWRCB, California Coastal Commission (CCC)) will not consider permitting an open-water intake unless a subsurface intake has been deemed infeasible or would result in greater environmental impacts. NOAA's MBNMS and National Marine Fisheries Service also established guidelines for discretionary approvals for new intake structures stating that subsurface intakes should be used where feasible and beneficial. CalAm has proposed subsurface intakes (slant wells) to supply source water to the MPWSP. Chapter 4 of this EIR/EIS evaluates the potential impacts of the proposed project and Chapter 5, Alternatives, presents an extensive analysis of alternative intake technologies and locations. Section 8.2.11.8 discusses the evolving subsurface intake technology and Appendix E3 presents the results of the test slant well long term pump test.

- **Environmentally Sensitive Habitat, the Coastal Act and City of Marina Local Coastal Land Use Plan**

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

- **Monterey Pipeline**

Comments were received on the April 2015 Draft EIR and the 2015 Federal Register Notice of Intent, expressing concerns about the Monterey Pipeline. Originally proposed by CalAm to follow a coastal route, the new Monterey Pipeline was evaluated as an alternative route in the April 2015 Draft EIR and in the October 2015 GWR Final EIR. The new 5.4-mile-long, 36-inch-diameter pipeline would allow for bi-directional flows of potable water between the GWR Project and the Monterey Peninsula and allow CalAm to maximize the benefits of water produced by the GWR and, through utilization of the ASR, allow CalAm to reduce reliance on Carmel River diversions. Concerns have been expressed about the construction impacts and cost of the pipeline that would include right angle, 45-degree bends and welded junctions. The CPUC approved the new Monterey Pipeline and Pump Station in September 2016, along with the Water Purchase Agreement for the GWR Project. In so doing, the Commission found that benefits associated with the pipeline/pump station project outweighed the significant and unavoidable impact to noise resources that will result from temporary construction. Therefore, as approved projects with utility independent from the proposed project, the Monterey Pipeline and Pump Station are evaluated as cumulative projects in this EIR/EIS since they are no longer a part of the proposed project.

**TABLE ES-1
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.2: Geology, Soils, and Seismicity							
Impact 4.2-1: Substantial soil erosion or loss of topsoil during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	LSM ↓
Impact 4.2-2: Exposure of people or structures to substantial adverse effects related to fault rupture.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-3: Exposure of people or structures to substantial adverse effects related to seismically-induced groundshaking.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-4: Exposure of people or structures to substantial adverse effects related to seismically-induced ground failure, including liquefaction, lateral spreading, or settlement.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-5: Exposure of people or structures to substantial adverse effects related to landslides or other slope failures.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-6: Exposure of people or structures to substantial adverse effects related to expansive soils.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-7: Exposure of structures to substantial adverse effects related to corrosive soils.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.2-8: Exposure of people or structures to substantial adverse effects related to land subsidence.	NI	NI ↓	NI =	NI =	NI =	NI =	NI =
Impact 4.2-9: Exposure of people or structures to substantial adverse effects related to alternative wastewater disposal systems.	LS	NI ↓	LS =	LS ↓	LS ↓	LS ↓	LS =
Impact 4.2-10: Accelerate and/or exacerbate natural rates of coastal erosion, scour, or dune retreat, resulting in damage to adjoining properties or a substantial change in the natural coastal environment.	LSM	NI ↓	NI ↓	NI ↓	NI ↓	SU ↑	5a: LSM = 5b: NI ↓
Impact 4.2-11: Degrades the physical structure of any geologic resource or alters any oceanographic process, such as sediment transport, that is measurably different from pre-existing conditions.	NI	NI ↓	NI =	SU ↑	SU ↑	SU ↑	NI =
Impact 4.2-C: Cumulative impacts related to Geology, Soils, and Seismicity.	LSM	NI ↓	LSM =	SU ↑	LSM =	SU ↑	LSM =

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.3: Surface Water Hydrology and Water Quality							
Impact 4.3-1: Degradation of water quality associated with increased soil erosion and inadvertent releases of hazardous chemicals during general construction activities.	LS	LS ↓	LS ↑	LS ↑	SU ↑	SU ↑	LS ↓
Impact 4.3-2: Degradation of water quality from construction-related discharges of dewatering effluent from open excavations and water produced during well drilling and development.	LSM	NI ↓	LSM ↑	LSM =	LSM ↑	LSM ↓	LSM ↓
Impact 4.3-3: Degradation of water quality from discharges of treated water and disinfectant from existing and newly installed pipelines during construction.	LS	NI ↓	LS ↑	LS =	LS ↑	LS ↓	5a: LS = 5b: LS ↑
Impact 4.3-4: Violate water quality standards or waste discharge requirements or degrade water quality from increased salinity as a result of brine discharge from the operation of the MPWSP Desalination Plant.	LSM	NI ↓	LSM =	LSM =	LSM ↑	SU ↑	LSM =
Impact 4.3-5: Violate water quality standards or waste discharge requirements or degrade water quality as a result of brine discharge from the operation of the MPWSP Desalination Plant.	LSM	NI ↓	LSM =	LSM =	LSM ↑	SU ↑	LSM =
Impact 4.3-6: Degradation of water quality due to discharges associated with maintenance of the subsurface slant wells and the ASR -5 and ASR-6 Wells.	LS	NI ↓	LS =	LS ↑	LS ↑	LS ↑	LS ↓
Impact 4.3-7: Alteration of drainage patterns such that there is a resultant increase in erosion, siltation, or the rate or amount of surface runoff.	LS	NI ↓	LS ↓	LS ↓	LS ↑	LS ↓	LS =
Impact 4.3-8: Alteration of drainage patterns such that there is an increase in flooding on- or offsite or the capacity of the stormwater drainage system is exceeded.	LS	NI ↓	LS ↑	LS ↓	LS ↑	LS ↓	LS ↓
Impact 4.3-9: Impedance or redirection of flood flows due to the siting of project facilities in a 100-year flood hazard area.	LS	NI ↓	LS ↓	LS =	LS ↓	SU ↑	5a: LS = 5b: LS ↓
Impact 4.3-10: Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to a tsunami.	LS	NI ↓	LS ↓	LS =	LS ↓	SU ↑	LS =
Impact 4.3-11: Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise.	LS	NI ↓	LS ↓	LS =	LS ↓	SU ↑	LS =
Impact 4.3-C: Cumulative impacts related to Surface Water Hydrology and Water Quality.	LSM	NI ↓	LSM =	LSM =	LSM ↑	SU ↑	LSM =

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.4: Groundwater Resources							
Impact 4.4-1: Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during construction.	NI	NI =	NI =	NI =	NI =	NI =	NI =
Impact 4.4-2: Violate any water quality standards or otherwise degrade groundwater quality during construction.	LS	NI ↓	LS =	LS ↑	LS ↑	LS ↑	LS =
Impact 4.4-3: Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during operations so as to expose well screens and pumps.	LS	NI ↓	LS ↓	LS ↓	LS ↓	LS ↓	5a: LS ↓ 5b: LS =
Impact 4.4-4: Violate any water quality standards or otherwise degrade groundwater quality during operations.	LSM	NI ↓	LS ↓	LS ↓	LS ↓	LS ↓	5a: LSM = 5b: LS ↓
Impact 4.4-C: Cumulative impacts related to Groundwater Resources.	LS	NI ↓	NI ↓	NI ↓	NI ↓	NI ↓	5a: LS = 5b: NI ↓
Section 4.5: Marine Resources							
Impact 4.5-1: Result in a substantial adverse effect, either directly or through habitat modifications, including direct disturbance, removal, filling, hydrological interruption, or discharge, on any marine species, natural community, or habitat, including candidate, sensitive, or special-status species identified in local or regional plans, policies, regulations or conservation plans (including protected wetlands or waters, critical habitat, essential fish habitat (EFH); or as identified by the CDFW, USFWS, and/or NMFS during construction	LS	NI ↓	LS ↑	SU ↑	SU ↑	SU ↑	LS ↓
Impact 4.5-2: Threaten to eliminate a marine plant or animal wildlife community or cause a fish or marine wildlife population to drop below self-sustaining levels during construction.	LS	NI ↓	LS ↑	LS ↑	LS ↑	LS ↑	LS ↓
Impact 4.5-3: Interfere substantially with the movement of any native marine resident or migratory fish or marine wildlife species or with established native resident or migratory marine wildlife corridors, or impede the use of native marine wildlife nursery sites during construction.	LS	NI ↓	LS ↑	LS ↑	LS ↑	LS ↑	LS ↓
Impact 4.5-4: Result in a substantial adverse effect, either directly or through habitat modifications, including direct disturbance, removal, filling, hydrological interruption, or discharge, on any marine species, natural community, or habitat, including candidate, sensitive, or special-status species identified in local or regional plans, policies, regulations or conservation plans (including protected wetlands or waters, critical habitat, essential fish habitat (EFH); or as identified by the CDFW, USFWS, and/or NMFS during operations.	LS	NI ↓	SU ↑	SU ↑	SU ↑	SU ↑	5a: LS = 5b: SU ↑

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.5: Marine Resources (cont.)							
Impact 4.5-5: Threaten to eliminate a marine plant or animal wildlife community or cause a fish or marine wildlife population to drop below self-sustaining levels during operations.	LS	NI ↓	LS =	LS ↑	LS =	LS =	LS ↓
Impact 4.5-6: Interfere substantially with the movement of any native marine resident or migratory fish or marine wildlife species or with established native resident or migratory marine wildlife corridors, or impede the use of native marine wildlife nursery sites during operations.	LS	NI ↓	LS =	LS ↑	LS =	LS =	LS ↓
Impact 4.5-C: Cumulative impacts on Marine Resources.	LS	NI ↓	LS =	SU ↑	NI ↓	SU ↑	LS ↓
Section 4.6: Terrestrial Biological Resources							
Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly or through habitat modification, during construction.	LSM	LSM ↓	LSM =	LSM ↓	LSM ↑	LSM =	LSM =
Impact 4.6-2: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.	LSM	LSM ↓	LSM =	LSM ↓	SU ↑	LSM =	LSM =
Impact 4.6-3: Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the State during construction.	LSM	NI ↓	LSM =	LSM =	LSM ↑	LSM ↑	LSM =
Impact 4.6-4: Be inconsistent with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance with local tree ordinances.	SU	NI ↓	SU ↓	SU =	SU =	SU =	SU =
Impact 4.6-5: Introduce or spread an invasive non-native species during construction.	LSM	LSM ↓	LSM =	LSM =	LSM =	LSM =	LSM =
Impact 4.6-6: Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.	LSM	↓	LSM =	LSM ↓	LSM =	LSM =	LSM =
Impact 4.6-7: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during project operations	LSM	↓	SU ↑	LSM ↓	LSM =	LSM =	5a: LSM = 5b: SU ↑
Impact 4.6-8: Result in substantial adverse effects on federal wetlands, federal other waters, and waters of the State during project operations.	LSM	NI ↓	LSM =	NI ↓	LSM =	LSM =	LSM =
Impact 4.6-9: Introduce or spread an invasive non-native species during project operations.	LSM	NI ↓	NI ↓	NI ↓	NI ↓	NI ↓	5a: LSM = 5b: NI ↓

TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.6: Terrestrial Biological Resources (cont.)							
Impact 4.6-10: Conflict with the provisions of an adopted Habitat Conservation Plans, natural community conservation plans or other approved local, regional, or state habitat conservation plan.	LSM	NI ↓	LSM =	LSM =	LSM =	LSM =	LSM =
Impact 4.6-C: Cumulative impacts related to Terrestrial Biological Resources.	SU	LS ↓	SU =	SU =	LSM ↓	SU =	SU ↑
Section 4.7: Hazards and Hazardous Materials							
Impact 4.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction.	LS	NI ↓	LS ↑	LS ↑	LS ↑	LS ↑	LS ↓
Impact 4.7-2: Encountering hazardous materials from other hazardous materials release sites during construction.	LSM	LSM ↓	LSM =	LSM ↑	LSM ↑	LSM ↑	LSM =
Impact 4.7-3: Project facilities would be located on a known hazardous materials site.	LS	NI ↓	LS =	LS ↑	LS ↑	LS ↑	LS =
Impact 4.7-4: Handle hazardous materials or emit hazardous emissions within 0.25 mile of schools during construction.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.7-5: Increase risk of wildland fires during construction.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.7-6: Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials during project operations.	LS	NI ↓	LS =	LS =	LS ↑	LS ↑	LS ↓
Impact 4.7-C: Cumulative impacts related to Hazards and Hazardous Materials.	LSM	LS ↓	LSM =	LSM ↑	LSM ↑	LSM ↑	LSM =
Section 4.8: Land Use, Land Use Planning, and Recreation							
Impact 4.8-1: Consistency with applicable plans, policies, and regulations related to land use and recreation that were adopted for the purpose of mitigating an environmental effect.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.8-2: Disrupt or preclude public access to or along the coast during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.8-C: Cumulative impacts related to Land Use, Land Use Planning, and Recreation.	LSM	NI ↓	LSM =	LSM =	LSM =	LSM =	LSM =

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.9: Traffic and Transportation							
Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-2: Temporary reduction in roadway capacities and increased traffic delays during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-3: Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-4: Impaired emergency access during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-6: Increased wear-and-tear on the designated haul routes used by construction vehicles.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.9-7: Parking interference during construction.	LSM	NI ↓	LSM ↑	LSM =	LSM =	LSM =	5a: LSM = 5b: LSM ↑
Impact 4.9-8: Long-term traffic increases on regional and local roadways during project operations and maintenance.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.9-C: Cumulative impacts related to Traffic and Transportation.	SU	NI ↓	SU =	SU =	SU =	SU =	SU =

TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.10: Air Quality							
Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.	SU	LSM ↓	SU ↑	SU ↑	SU ↑	SU =	SU =
Impact 4.10-2: Construction activities could conflict with implementation of the applicable air quality plan.	SU	NI ↓	SU ↑	SU ↑	SU ↑	SU =	SU =
Impact 4.10-3: Expose sensitive receptors to substantial pollutant concentrations and/or <i>Coccidioides immitis</i> (Valley Fever) spores or create objectionable odors affecting a substantial number of people during construction.	LS	NI ↓	LS ↑	LS ↑	SU ↑	SU ↑	LS =
Impact 4.10-4: Long-term increase of criteria pollutant emissions that could contribute to a violation of an ambient air quality standard during operations.	LS	NI ↓	LS =	LS ↑	LSM ↑	LS ↑	LS ↓
Impact 4.10-5: Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during operations.	LS	NI ↓	LS =	LS ↑	LSM ↑	LS ↑	LS ↓
Impact 4.10-C: Cumulative impacts related to Air Quality.	SU	LS ↓	SU ↑	SU ↑	SU ↑	SU ↑	SU =
Section 4.11: Greenhouse Gas Emissions							
Impact 4.11-1: Incremental contribution to climate change from GHG emissions associated with the proposed project.	LSM	LSM ↓	LSM =	LSM =	SU ↑	LSM =	LSM =
Impact 4.11-2: Conflict with the Executive Order B-30-15 Emissions Reduction Goal.	LSM	NI ↓	LSM =	LSM =	SU ↑	LSM =	LSM =
Impact 4.11-3: Conflict with AB 32 Climate Change Scoping Plan.	LSM	NI ↓	LSM =	LSM =	SU ↑	LSM =	LSM =
Impact 4.11-C: Cumulative impacts related to Greenhouse Gas Emissions.	LSM	LS ↓	LSM =	LSM =	SU ↑	LSM =	LSM =
Section 4.12: Noise and Vibration							
Impact 4.12-1: Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	SU	NI ↓	SU ↑	SU ↑	SU ↑	SU ↑	5a: SU = 5b: SU ↑

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.12: Noise and Vibration (cont.)							
Impact 4.12-2: Expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.12-3: Exposure of people to or generation of excessive groundborne vibration during construction.	LSM	NI ↓	LSM ↓	LSM ↓	LSM ↓	LSM ↓	5a: LSM = 5b: LSM ↓
Impact 4.12-4: Consistency with the construction time limits established by the local jurisdictions.	LSM	NI ↓	LSM =	LSM =	LSM ↑	LSM =	5a: LSM = 5b: LSM ↓
Impact 4.12-5: Substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the project during operations.	LSM	NI ↓	LSM =	LSM =	LSM ↑	LSM ↑	LSM =
Impact 4.12-6: Expose people to or generate operational noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during operation.	LS	NI ↓	LS =	LS =	LS =	LSM ↑	LS =
Impact 4.12-C: Cumulative impacts related to Noise and Vibration.	SU	NI ↓	SU ↑	SU ↑	SU ↑	SU ↑	5a: SU = 5b: SU ↑
Section 4.13: Public Services and Utilities							
Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: 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	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: 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	NI ↓	LS =	LS =	LS ↑	LS ↓	LS =

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.13: Public Services and Utilities (cont.)							
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	NI ↓	LSM =	LSM =	LS ↓	LS ↓	LSM =
Impact 4.13-5: Increased corrosion of the MRWPCA outfall and diffuser as a result of brine discharge associated with project operations.	LSM	NI ↓	LSM =	LSM =	NI ↓	NI ↓	LSM =
Impact 4.13-C: Cumulative impacts related to Public Services and Utilities.	LSM	NI ↓	LSM =	LSM =	LSM ↓	LSM ↓	LSM =
Section 4.14: Aesthetic Resources							
Impact 4.14-1: Construction-related impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LS	NI ↓	LS =	LS =	LS =	LSM ↑	LS =
Impact 4.14-2: Temporary sources of substantial light or glare during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	LSM =
Impact 4.14-3: Permanent impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LSM	NI ↓	LSM =	LSM ↓	LSM ↓	LSM =	LSM =
Impact 4.14-4: Permanent new sources of light or glare.	LSM	NI ↓	LSM =	LSM =	LSM ↑	LSM ↑	LSM =
Impact 4.14-C: Cumulative impacts related to Aesthetic Resources	LSM	NI ↓	LSM =	LSM =	LSM =	LSM =	LSM =
Section 4.15: Cultural and Paleontological Resources							
Impact 4.15-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5 during construction.	NI	NI =	NI =	NI =	NI =	SU ↑	NI =
Impact 4.15-2: Cause a substantial adverse change during construction in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5.	LSM	LSM ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.15-3: Directly or indirectly destroy a unique paleontological resource or site, or unique geological feature during construction.	LS	NI ↓	LS ↑	LS ↑	LS ↑	LS ↑	5a: LS = 5b: LS ↑

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.15: Cultural and Paleontological Resources (cont.)							
Impact 4.15-4: Disturbance any human remains, including those interred outside of formal cemeteries, during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM = 5b: LSM ↑
Impact 4.15-C: Cumulative impacts related to Cultural and Paleontological Resources.	LS	LS ↓	LS =	LSM ↑	LSM ↑	LSM ↑	LSM =
Section 4.16: Agricultural Resources							
Impact 4.16-1: Result in changes in the existing environment that, due to their location or nature, could temporarily disrupt agricultural activities or result in the permanent conversion of farmland to non-agricultural use.	LSM	NI ↓	LSM =	LSM =	LSM ↑	NI ↓	LSM =
Impact 4.16-2: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	LS	NI ↓	LS =	LS =	LS ↑	NI ↓	LS =
Impact 4.16-3: Conflict with zoning for agricultural uses or with Williamson Act contracts.	LS	NI ↓	LS =	LS =	LS ↑	NI ↓	LS =
Impact 4.16-C: Cumulative impacts related to Agricultural Resources.	LSM	NI ↓	LSM =	LSM =	LSM ↑	NI ↓	LSM =
Section 4.17: Mineral Resources							
Impact 4.17-1: Loss of availability of known mineral resources that are of value to the region or residents of the state or result in the loss of a locally-recognized important mineral resource recovery site.	LS	NI ↓	LS ↓	LS ↓	LS ↓	LS ↓	5a: LS = 5b: LS ↓
Impact 4.17-C: Cumulative impacts related to Mineral Resources.	LS	NI ↓	LS ↓	LS ↓	LS ↓	LS ↓	5a: LS = 5b: LS ↓

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Section 4.18: Energy Conservation							
Impact 4.18-1: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during construction.	LSM	NI ↓	LSM ↑	LSM ↑	LSM ↑	LSM ↑	5a: LSM ↓ 5b: LSM ↑
Impact 4.18-2: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during operations.	LS	NI ↓	LS ↑	LS ↑	LS ↑	LS ↑	LS ↓
Impact 4.18-3: Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand during operations.	LS	NI ↓	LS ↑	LS ↑	SU ↑	LS ↑	LS ↓
Impact 4.18-C: Cumulative impacts related to Energy Resources.	LSM	NI ↓	LSM ↑	LSM ↑	SU ↑	LSM ↑	5a: LSM ↓ 5b: LSM ↓
Section 4.19: Population and Housing							
Impact 4.19-1: Induce substantial population growth directly during project construction.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.19-2: Induce substantial population growth directly during project operations.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Impact 4.19-C: Cumulative impacts related to Population and Housing.	LS	NI ↓	LS =	LS =	LS =	LS =	LS =
Section 4.20 Socioeconomics and Environmental Justice							
Impact 4.20-1: Reductions in the rate of employment, total income, or business activity in Monterey County.	LSM	SU ↑	LSM =	LSM =	LSM =	LSM =	LSM =
Impact 4.20-2: Disproportionately high and adverse effects on low-income or minority populations.	LS	SU ↑	LS =	LS ↓	SU ↑	SU ↑	LS ↓
Impact 4.20-C: Cumulative impacts related to Socioeconomics and/or Environmental Justice.	LSM	SU ↑	LSM =	LSM =	SU ↑	SU ↑	LSM ↓

**TABLE ES-1 (Continued)
ALTERNATIVES IMPACT SUMMARY**

Impact	Proposed Project 10 Slant Wells at CEMEX	No Action	Alt. 1: Slant Wells at Potrero Road	Alt. 2: Open Water Intake at Moss Landing	Alt. 3: Deep Water Desal	Alt. 4: People's Project	Alt. 5: Reduced Size Desal
Growth Inducement							
Impact 6.3-1: Secondary effects of planned growth.	SU	NI ↓	LS ↓	SU ↑	SU ↑	SU ↑	LS ↓
Impact 6.3-C: Cumulative impacts related to growth inducement.	SU	NI ↓	SU ↑	SU ↑	SU ↑	SU ↑	SU =

NOTES:


↑ Increased severity of impact ↓ Decreased severity of impact = Same severity of impact

NI – No Impact

LS = Less than Significant impact, no mitigation proposed

LSM = Less than Significant impact with Mitigation

SU = Significant and Unavoidable impact, even with implementation of mitigation

 = Beneficial Impact

**TABLE ES-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.2: Geology, Soils, and Seismicity															
Impact 4.2-1: Substantial soil erosion or loss of topsoil during construction.	LS	LS	LSM	LS	LS	LSM	LSM	LS	LSM	LS	LS	LS	LSM		LSM
<i>Mitigation Measures</i>															
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts on Sensitive Communities.	-	-	X	-	-	X	X	-	X	-	-	-	X		
4.16-1: Minimize Disturbance to Farmland	-	-	X	-	-	X	X	-	-	-	-	-	-		
Impact 4.2-2: Exposure of people or structures to substantial adverse effects related to fault rupture.	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	LS	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-3: Exposure of people or structures to substantial adverse effects related to seismically-induced groundshaking.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-4: Exposure of people or structures to substantial adverse effects related to seismically-induced ground failure, including liquefaction, lateral spreading, or settlement.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-5: Exposure of people or structures to substantial adverse effects related to landslides or other slope failures.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-6: Exposure of people or structures to substantial adverse effects related to expansive soils.	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-7: Exposure of structures to substantial adverse effects related to corrosive soils.	NI	LS	NI	NI	NI	NI	NI	NI	LS	LS	LS	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-8: Exposure of people or structures to substantial adverse effects related to land subsidence.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		NI
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-9: Exposure of people or structures to substantial adverse effects related to alternative wastewater disposal systems.	LS	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.2: Geology, Soils, and Seismicity (cont.)															
Impact 4.2-10: Accelerate and/or exacerbate natural rates of coastal erosion, scour, or dune retreat, resulting in damage to adjoining properties or a substantial change in the natural coastal environment.	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.2-9: Slant Well Abandonment Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-11: Degrades the physical structure of any geologic resource or alters any oceanographic process, such as sediment transport, that is measurably different from pre-existing conditions.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		NI
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.2-C: Cumulative impacts related to Geology, Soils, and Seismicity.	LSM for cumulative impacts associated with soil erosion or loss of topsoil during construction, and for cumulative impacts associated with coastal erosion and bluff retreat.														
Section 4.3: Surface Water Hydrology and Water Quality															
Impact 4.3-1: Degradation of water quality associated with increased soil erosion and inadvertent releases of hazardous chemicals during general construction activities.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.3-2: Degradation of water quality from construction-related discharges of dewatering effluent from open excavations and water produced during well drilling and development.	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LS	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.7-2b: Soil and Groundwater Management Plan.	-	X	X	X	X	X	X	X	-	X	X	X	X		
Impact 4.3-3: Degradation of water quality from discharges of treated water and disinfectant from existing and newly installed pipelines during construction.	NI	NI	LS	LS	LS	LS	LS	LS	NI	LS	LS	LS	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.3-4: Violate water quality standards or waste discharge requirements or degrade water quality from increased salinity as a result of brine discharge from the operation of the MPWSP Desalination Plant.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.3-4: Operational Discharge Monitoring, Analysis, Reporting, and Compliance	-	X	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.3-5: Violate water quality standards or waste discharge requirements or degrade water quality as a result of brine discharge from the operation of the MPWSP Desalination Plant.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.3-5: Implement Protocols to Avoid Exceeding Water Quality Objectives	-	X	-	-	-	-	-	-	-	-	-	-	-		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.3: Surface Water Hydrology and Water Quality (cont.)															
Impact 4.3-6: Degradation of water quality due to discharges associated with maintenance of the subsurface slant wells and the ASR -5 and ASR-6 Wells.	LS	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-7: Alteration of drainage patterns such that there is a resultant increase in erosion, siltation, or the rate or amount of surface runoff.	LS	LS	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-8: Alteration of drainage patterns such that there is an increase in flooding on- or offsite or the capacity of the stormwater drainage system is exceeded.	LS	LS	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-9: Impedance or redirection of flood flows due to the siting of project facilities in a 100-year flood hazard area.	LS	NI	LS	NI	NI	NI	LS	LS	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-10: Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to a tsunami.	LS	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-11: Exposure of people or structures to a significant risk of loss, injury, or death from flooding due to sea level rise.	LS	LS	LS	NI	NI	NI	LS	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.3-C: Cumulative impacts related to Surface Water Hydrology and Water Quality.	LSM for cumulative impacts associated with surface water quality during construction, and ocean water quality during operation.														
Section 4.4: Groundwater Resources															
Impact 4.4-1: Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.4-2: Violate any water quality standards or otherwise degrade groundwater quality during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.4: Groundwater Resources (cont.)															
Impact 4.4-3: Deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level during operations so as to expose well screens and pumps.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Applicant Proposed Measure</i>															
4.4-3: Groundwater Monitoring and Avoidance of Well Damage.	X	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.4-4: Violate any water quality standards or otherwise degrade groundwater quality during operations.	LSM	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.4-4: Groundwater Monitoring and Avoidance of Impacts on Groundwater Remediation Plumes.	X	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.4-C: Cumulative impacts related to Groundwater Resources.															
LS															
Section 4.5: Marine Resources															
Impact 4.5-1: Result in a substantial adverse effect, either directly or through habitat modifications, including direct disturbance, removal, filling, hydrological interruption, or discharge, on any marine species, natural community, or habitat, including candidate, sensitive, or special-status species identified in local or regional plans, policies, regulations or conservation plans (including protected wetlands or waters, critical habitat, essential fish habitat (EFH); or as identified by the CDFW, USFWS, and/or NMFS during construction	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.5-2: Threaten to eliminate a marine plant or animal wildlife community or cause a fish or marine wildlife population to drop below self-sustaining levels during construction.	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.5-3: Interfere substantially with the movement of any native marine resident or migratory fish or marine wildlife species or with established native resident or migratory marine wildlife corridors, or impede the use of native marine wildlife nursery sites during construction.	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.5-4: Result in a substantial adverse effect, either directly or through habitat modifications, including direct disturbance, removal, filling, hydrological interruption, or discharge, on any marine species, natural community, or habitat, including candidate, sensitive, or special-status species identified in local or regional plans, policies, regulations or conservation plans (including protected wetlands or waters, critical habitat, essential fish habitat (EFH); or as identified by the CDFW, USFWS, and/or NMFS during operations.	LS	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.5-5: Threaten to eliminate a marine plant or animal wildlife community or cause a fish or marine wildlife population to drop below self-sustaining levels during operations.	LS	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.5: Marine Resources (cont.)															
Impact 4.5 6: Interfere substantially with the movement of any native marine resident or migratory fish or marine wildlife species or with established native resident or migratory marine wildlife corridors, or impede the use of native marine wildlife nursery sites during operations.	LS	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.5-C: Cumulative impacts on Marine Resources.	LS														
Section 4.6: Terrestrial Biological Resources															
Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly or through habitat modification, during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1c: General Avoidance and Minimization Measures.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1d: Protective Measures for Western Snowy Plover.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	
4.6-1e: Avoidance and Minimization Measures for Special-status Plants.	X	X	X	-	-	X	X	X	X	X	X	X	-	X	
4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly.	X	-	X	-	-	X	-	X	-	-	-	-	-	X	
4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.	X	-	X	-	-	X	X	X	X	X	-	-	-	X	
4.6-1h: Avoidance and Minimization Measures for Western Burrowing Owl.	-	-	X	-	-	X	-	X	-	-	-	-	-	X	
4.6-1i: Avoidance and Minimization Measures for Nesting Birds.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1j: Avoidance and Minimization Measures for American Badger.	-	X	X	-	-	X	X	X	X	X	X	X	-	X	
4.6-1k: Avoidance and Minimization Measures for Monterey Dusky-Footed Woodrat.	-	-	-	-	-	-	-	X	X	X	X	X	X	X	
4.6-1l: Avoidance and Minimization Measures for Special-status Bats.	-	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine.	-	-	-	-	-	-	-	-	X	X	X	X	X	-	
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
4.6-1o: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander.	-	X	X	X	X	X	X	-	-	-	X	X	X	X	
4.6-1p: Control Measures for Spread of Invasive Plants	X	X	X	-	-	X	X	X	X	X	-	-	-	X	
4.6-1q: Frac-out Contingency Plan	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
4.12-1b: General Noise Controls for Construction Equipment.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	
4.14-2: Site-Specific Construction Lighting Measures.	X	X	X	X	X	X	X	X	X	X	-	-	-	-	

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.6: Terrestrial Biological Resources (cont.)															
Impact 4.6-2: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.	LSM	LSM	LSM	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
4.6-1c: General Avoidance and Minimization Measures.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
4.6-1d: Protective Measures for Western Snowy Plover.	X	-	X	-	-	-	-	-	-	-	-	-	-	-	
4.6-1e: Avoidance and Minimization Measures for Special-status Plants.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
4.6-1o: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander.	-	-	-	-	-	-	-	-	-	-	-	X	X	-	
4.6-1p: Control Measures for Spread of Invasive Plants	X	X	X	-	-	X	X	X	X	X	-	-	-	-	
4.6-1q: Frac-out Contingency Plan	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.	X	--	X	-	-	X	X	X	-	-	-	-	-	X	
4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities and Environmentally Sensitive Habitat Areas.	X	X	X	-	-	X	X	X	X	X	X	X	X	X	
Impact 4.6-3: Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the State during construction.	LSM	LS	LSM	LSM	LSM	LSM	LSM	LSM	LS	LS	LSM	LSM	LSM	LS	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	X	X	X	X	X	X	-	-	X	X	X	-	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	X	X	X	X	X	X	-	-	X	X	X	-	
4.6-1c: General Avoidance and Minimization Measures.	X	-	X	X	X	X	X	X	-	-	X	X	X	-	
4.6-1q: Frac-out Contingency Plan	-	-	-	-	-	-	X	-	-	-	-	-	-	-	
4.6-3: Avoid, Minimize, and or Mitigate Impacts to Wetlands.	-	-	-	-	-	X	X	-	-	-	X	X	X	-	
Impact 4.6-4: Be inconsistent with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance with local tree ordinances.	SU	LSM	SU	LSM	LSM	SU	LSM	SU	LSM	LSM	LSM	LSM	LSM	SU	SU
<i>Mitigation Measures</i>															
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	X	-	-	X	-	X	-	-	-	-	-	X	
4.6-4: Compliance with Local Tree Ordinances.	-	X	X	X	X	X	X	X	X	X	X	X	X	-	
Impact 4.6-5: Introduce or spread an invasive non-native species during construction.	LSM	LSM	LSM	NI	NI	LSM	LSM	LSM	LSM	LSM	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	X	X	-	-	X	X	X	X	X	-	-	-	-	
4.6-1p: Control Measures for Spread of Invasive Plants.	X	X	X	-	-	X	X	X	X	X	-	-	-	-	

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.6: Terrestrial Biological Resources (cont.)															
Impact 4.6-6: Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.	LSM	LSM	NI	NI	NI	NI	NI	NI	LSM	NI	NI	LSM	LSM	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1d: Protective Measures for Western Snowy Plover.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1e: Avoidance and Minimization Measures for Special-status Plants.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1i: Avoidance and Minimization Measures for Nesting Birds.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1p: Control Measures for Spread of Invasive Plants.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-6: Installation and Monitoring of Bird Deterrents at the Brine Storage Basin.	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-
4.12-1b: General Noise Controls for Construction Equipment.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.12-5: Stationary Source Noise Controls.	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-
4.14-2: Site-Specific Nighttime Lighting Measures.	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-
Impact 4.6-7: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during project operations	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1d: Protective Measures for Western Snowy Plover	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1n: Habitat Mitigation and Monitoring Plan.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-1p: Control Measures for Spread of Invasive Plants	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.6: Terrestrial Biological Resources (cont.)															
Impact 4.6-8: Result in substantial adverse effects on federal wetlands, federal other waters, and waters of the State during project operations.	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1b: Construction Worker Environmental Awareness Training and Education Program.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1c: General Avoidance and Minimization Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.6-9: Introduce or spread an invasive non-native species during project operations.	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
4.6-1p: Control Measures for Spread of Invasive Plants.	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.6-10: Conflict with the provisions of an adopted Habitat Conservation Plans, natural community conservation plans or other approved local, regional, or state habitat conservation plan.	NI	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	NI	NI	NI	LSM
<i>Mitigation Measures</i>															
4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.								X							
4.6-1n: Habitat Mitigation and Monitoring Plan.	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
4.6-2b: Avoid, Minimize, and Compensate for Direct Construction Impacts to Sensitive Communities.	-	-	-	-	-	-	-	X	-	-	-	-	-	-	
4.6-8: Management Requirements within Borderland Development Areas along Natural Resource Management Area Interface.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.6-C: Cumulative impacts related to Terrestrial Biological Resources.	SU for cumulative impacts associated with inconsistencies with local policies or ordinances protecting biological resources.														
	LSM for cumulative impacts associated with all other project impacts.														
Section 4.7: Hazards and Hazardous Materials															
Impact 4.7-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Impact 4.7-2: Encountering hazardous materials from other hazardous materials release sites during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM
<i>Mitigation Measures</i>															
4.7-2a: Health and Safety Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
4.7-2b: Soil and Groundwater Management Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.7: Hazards and Hazardous Materials (cont.)															
Impact 4.7-3: Project facilities would be located on a known hazardous materials site.	NI	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.7-4: Handle hazardous materials or emit hazardous emissions within 0.25 mile of schools during construction.	NI	NI	NI	NI	NI	LS	NI	LS	NI	LS	LS	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.7-5: Increase risk of wildland fires during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.7-6: Create a significant hazard to the public or the environment through the routine transport, use, disposal, or accidental release of hazardous materials during project operations.	LS	LS	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.7-C: Cumulative impacts related to Hazards and Hazardous Materials.	LSM for cumulative impacts associated with the potential to encounter hazardous materials during construction.														
Section 4.8: Land Use, Land Use Planning, and Recreation															
Impact 4.8-1: Consistency with applicable plans, policies, and regulations related to land use and recreation that were adopted for the purpose of mitigating an environmental effect.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.8-2: Disrupt or preclude public access to or along the coast during construction.	LS	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	-	-	-	-	-	X	-	-	-	-	-		
Impact 4.8-C: Cumulative impacts related to Land Use, Land Use Planning, and Recreation.	LS														
Section 4.9: Traffic and Transportation															
Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.	LS	LS	LS	LS	LS	LS	LS	LSM	LSM	LSM	LSM	LSM	LS		LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	-	-	-	-	-	X	X	X	X	X	-		
Impact 4.9-2: Temporary reduction in roadway capacities and increased traffic delays during construction.	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LS	LSM	LSM	LSM	LS		LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	X	X	X	X	X	-	X	X	X	-		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.9: Traffic and Transportation (cont.)															
Impact 4.9-3: Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.9-4: Impaired emergency access during construction.	LS	LS	LSM	LSM	LSM	LSM	LSM	LSM	LS	LSM	LSM	LSM	LS	LS	LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	X	X	X	X	X	-	X	X	X	-	-	
Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.	NI	NI	LSM	NI	NI	LSM	LSM	LSM	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.	-	-	X	-	-	X	X	X	-	-	-	-	-		
Impact 4.9-6: Increased wear-and-tear on the designated haul routes used by construction vehicles.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.9-6: Roadway Rehabilitation Program.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.9-7: Parking interference during construction.	NI	NI	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LSM	LSM
<i>Mitigation Measures</i>															
4.9-7: Construction Parking Requirements.	-	-	-	-	-	-	-	-	-	-	-	-	-	X	
Impact 4.9-8: Long-term traffic increases on regional and local roadways during project operations and maintenance.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.9-C: Cumulative impacts related to Traffic and Transportation.	SU for cumulative impacts associated with traffic during construction.														
Mitigation Measure 4.9-C: Construction Traffic Coordination Plan.	X														
Section 4.10: Air Quality															
Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU		SU
<i>Mitigation Measures</i>															
4.10-1a: Equipment with High-Tiered Engine Standards.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.10-1b: Idling Restrictions.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.10-1c: Construction Fugitive Dust Control Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.10-1e: Off-site Mitigation Program	X	X	X	X	X	X	X	X	X	X	X	X	X		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.10: Air Quality (cont.)															
Impact 4.10-2: Construction activities could conflict with implementation of the applicable air quality plan.	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU		SU
<i>Mitigation Measures</i>															
4.10-1a: Equipment with High-Tiered Engine Standards.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.10-1b: Idling Restrictions.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.10-3: Expose sensitive receptors to substantial pollutant concentrations and/or <i>Coccidioides immitis</i> (Valley Fever) spores or create objectionable odors affecting a substantial number of people during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.10-4: Long-term increase of criteria pollutant emissions that could contribute to a violation of an ambient air quality standard during operations.	LS	LS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.10-5: Expose sensitive receptors to substantial pollutant concentrations or create objectionable odors affecting a substantial number of people during operations.	NI	LS	NI	NI	NI	NI	NI	NI	LS	NI	NI	NI	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.10-C: Cumulative impacts related to Air Quality.	SU for cumulative impacts associated with air quality standards during construction.														
Section 4.11: Greenhouse Gas Emissions															
Impact 4.11-1: Incremental contribution to climate change from GHG emissions associated with the proposed project.	LSM														
<i>Mitigation Measures</i>															
4.11-1: GHG Emissions Reductions Plan.	X														
4.18-1: Construction Equipment and Vehicle Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.11-2: Conflict with the Executive Order B-30-15 Emissions Reduction Goal.	LSM														
<i>Mitigation Measures</i>															
4.11-1: GHG Emissions Reduction Plan.	X														
4.18-1: Construction Equipment Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.11-3: Conflict with AB 32 Climate Change Scoping Plan.	LSM														
<i>Mitigation Measures</i>															
4.11-1: GHG Emissions Reduction Plan.	X														
Impact 4.11-C: Cumulative impacts related to Greenhouse Gas Emissions.	LSM														

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.12: Noise and Vibration															
Impact 4.12-1: Cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.	LS	LS	LS	LS	LS	LSM	SU	LSM	SU	LS	LS	LS	LSM		SU
<i>Mitigation Measures</i>															
4.12-1a: Neighborhood Notice and Construction Disturbance Coordinator.	-	-	-	-	-	X	X	X	X	-	-	-	X		
4.12-1b: General Noise Controls for Construction Equipment and Activities.	-	-	-	-	-	X	X	X	X	-	-	-	X		
4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.	-	-	-	-	-	X	X	X	-	-	-	-	-		
4.12-1d: Additional Noise Controls for ASR-5 and ASR-6 Wells.	-	-	-	-	-	-	-	-	X	-	-	-	-		
4.12-1e: Offsite Accommodations for Substantially Affected Nighttime Receptors.	-	-	-	-	-	-	-	-	X	-	-	-	-		
Impact 4.12-2: Expose people to or generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during construction.	LS	LS	LS	LS	LS	LSM	LSM	LSM	NI	LSM	LS	LS	LS		LSM
<i>Mitigation Measures</i>															
4.12-1b: General Noise Controls for Construction Equipment.	-	-	-	-	-	X	X	X	-	X	-	-	-		
4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.	-	-	-	-	-	X	X	X	-	-	-	-	-		
Impact 4.12-3: Exposure of people to or generation of excessive groundborne vibration during construction.	LS	LS	LSM	LS	LS	LSM	LSM	LSM	LS	LS	LS	LS	LS		LSM
<i>Mitigation Measures</i>															
4.12-3: Vibration Reduction Measures.	-	-	-	-	-	X	X	X	-	-	-	-	-		
Impact 4.12-4: Consistency with the construction time limits established by the local jurisdictions.	NI	NI	NI	NI	NI	LSM	NI	LSM	LSM	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.	-	-	-	-	-	-	-	-	X	-	-	-	-		
4.12-4: Nighttime Construction Restrictions in Marina.						X		X							
Impact 4.12-5: Substantial permanent increases in ambient noise levels in the project vicinity above levels existing without the project during operations.	LS	LS	NI	NI	NI	NI	NI	NI	LSM	NI	LS	LSM	LS		LSM
<i>Mitigation Measures</i>															
4.12-5: Stationary-Source Noise Controls.	-	-	-	-	-	-	-	-	X	-	-	X	-		
Impact 4.12-6: Expose people to or generate operational noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies during operation.	LS	LS	LS	LS	LS	LS	NI	LS	NI	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.12-C: Cumulative impacts related to Noise and Vibration	SU for cumulative impacts associated with nighttime noise impacts during construction.														
	LSM for cumulative impacts associated with construction-related vibration.														

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.13: Public Services and Utilities															
Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.13-1a: Locate and Confirm Utility Lines.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.13-1b: Coordinate Final Construction Plans with Affected Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.13-1c: Safeguard Employees from Potential Accidents Related to Underground Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.13-1d: Emergency Response Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.13-1e: Notify Local Fire Departments.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.13-1f: Ensure Prompt Reconnection of Utilities.	X	X	X	X	X	X	X	X	X	X	X	X	X		
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	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.13-2: Construction Waste Reduction and Recycling Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
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	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
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.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.3-4: Operational Discharge Monitoring, Analysis, Reporting, and Compliance.	-	X	-	-	-	-	-	-	-	-	-	-	-		
4.3-5: Implement Protocols to Avoid Exceeding Water Quality Objectives.	-	X	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.13-5: Increased corrosion of the MRWPCA outfall as a result of brine discharge associated with project operations.	NI	LSM	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.13-5a: Replacement of WEKO Seal Clamps, Periodic Inspections and As-Needed Repairs for Offshore Segment of MRWPCA Ocean Outfall.	-	X	-	-	-	-	-	-	-	-	-	-	-		
4.13-5b: Install Protective Lining in Land Segment of MRWPCA Ocean Outfall	-	X	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.13-C: Cumulative impacts related to Public Services and Utilities.	LSM for cumulative impacts related to wastewater treatment requirement and corrosion of the MRWPCA outfall and diffuser during operations.														
Section 4.14: Aesthetic Resources															
Impact 4.14-1: Construction-related impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
4.14-1: Maintain Clean and Orderly Construction Sites.	X	X	X	X	X	X	X	X	X	X	X	X	X		

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.14: Aesthetic Resources (cont.)															
Impact 4.14-2: Temporary sources of substantial light or glare during construction.	LSM	LS	LSM	LSM	LSM	LSM	LSM	LSM	LSM	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.14-2: Site-Specific Nighttime Lighting Measures.	X	-	X	X	X	X	X	X	X	-	-	-	-		
Impact 4.14-3: Permanent impacts on scenic resources (vistas, roadways, and designated scenic areas) or the visual character of the project area and its surroundings.	LSM	LS	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	LS		LSM
<i>Mitigation Measures</i>															
4.14-3a: Facility Design.	X	-	-	-	-	-	-	-	X	-	-	-	-		
4.14-3b: Facility Screening.	-	-	-	-	-	-	-	-	X	-	-	-	-		
Impact 4.14-4: Permanent new sources of light or glare.	NI	LS	NI	NI	NI	NI	NI	NI	LSM	NI	NI	NI	LSM		LSM
<i>Mitigation Measures</i>															
4.14-2: Site-Specific Nighttime Lighting Measures.	-	X	-	-	-	-	-	-	X	-	-	-	X		
Impact 4.14-C: Cumulative impacts related to Aesthetic Resources	LSM for cumulative impacts associated with nighttime lighting impacts during construction.														
Section 4.15: Cultural and Paleontological Resources															
Impact 4.15-1: Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5 during construction.	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI		NI
<i>Mitigation Measures</i>															
4.15-1: Avoidance and Vibration Monitoring for Pipeline Installation	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.15-2: Cause a substantial adverse change during construction in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines or historic properties pursuant to 36 CFR 800.5.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.15-2a: Establish Archaeologically Sensitive Areas.	-	-	X	-	-	-	X	-	-	-	-	-	-		
4.15-2b: Inadvertent Discovery of Cultural Resources.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.15-3: Directly or indirectly destroy a unique paleontological resource or site, or unique geological feature during construction.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.15-4: Disturbance any human remains, including those interred outside of formal cemeteries, during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.15-4: Inadvertent Discovery of Human Remains.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.15-C: Cumulative impacts related to Cultural and Paleontological Resources.	LS														

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.16: Agricultural Resources															
Impact 4.16-1: Result in changes in the existing environment that, due to their location or nature, could temporarily disrupt agricultural activities or result in the permanent conversion of farmland to non-agricultural use.	NI	LS	LSM	NI	NI	LSM	LSM	NI	NI	NI	NI	NI	NI		LSM
<i>Mitigation Measures</i>															
4.16-1: Minimize Disturbance to Farmland.	-	-	X	-	-	X	X	-	-	-	-	-	-		
Impact 4.16-2: Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.	NI	NI	LS	NI	NI	LS	LS	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.16-3: Conflict with zoning for agricultural uses or with Williamson Act contracts.	NI	NI	LS	NI	NI	LS	LS	NI	NI	NI	NI	NI	NI		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.16-C: Cumulative impacts related to Agricultural Resources.	LSM for cumulative impacts related to conversion of farmland to non-agricultural use during construction.														
Section 4.17: Mineral Resources															
Impact 4.17-1: Loss of availability of known mineral resources that are of value to the region or residents of the state or result in the loss of a locally-recognized important mineral resource recovery site.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.17-C: Cumulative impacts related to Mineral Resources.	LS														
Section 4.18: Energy Conservation															
Impact 4.18-1: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during construction.	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM	LSM		LSM
<i>Mitigation Measures</i>															
4.18-1: Construction Equipment and Vehicle Efficiency Plan.	X	X	X	X	X	X	X	X	X	X	X	X	X		
4.10-1b: Idling Restrictions.	X	X	X	X	X	X	X	X	X	X	X	X	X		
Impact 4.18-2: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during operations.	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS	LS		LS
<i>Mitigation Measures</i>															
None proposed.	-	-	-	-	-	-	-	-	-	-	-	-	-		
Impact 4.18-3: Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand during operations.	LS														
<i>Mitigation Measures</i>															
4.11-1: GHG Emissions Reduction Plan	X														
Impact 4.18-C: Cumulative impacts related to Energy Resources.	LSM for impact associated with energy use during construction.														

**TABLE ES-2 (Continued)
SUMMARY OF IMPACTS AND MITIGATION MEASURES – MPWSP PROPOSED PROJECT**

IMPACT	Subsurface Slant Wells	MPWSP Desalination Plant	Source Water PL	Brine Discharge PL	PL to CSIP Pond	New Desalinated Water PL	Castroville PL	New Transmission Main	ASR-5 and ASR-6 Wells	ASR Conveyance PL, ASR Pump-to-Waste PL, ASR Recirculation PL	Ryan Ranch-Bishop Interconnection Improvements	Main System-Hidden Hills Interconnection Improvements	Carmel Valley Pump Station	Staging Areas	Overall Impact Significance Determination for Proposed Project
Section 4.19: Population and Housing															
Impact 4.19-1: Induce substantial population growth directly during project construction.															LS
<i>Mitigation Measures</i>															
None proposed.															-
Impact 4.19-2: Induce substantial population growth directly during project operations.															LS
None proposed.															-
Impact 4.19-C: Cumulative impacts related to Population and Housing.															
Section 4.20: Socioeconomics and Environmental Justice															
Impact 4.20-1: Reductions in the rate of employment, total income, or business activity in Monterey County.															LSM
<i>Mitigation Measures</i>															
4.9-1: Traffic Control and Safety Assurance Plan.															X
Impact 4.20-2: Disproportionately high and adverse effects on low-income or minority populations.															LS
<i>Mitigation Measures</i>															
None proposed.															-
Impact 4.20-C: Cumulative impacts related to Socioeconomics and/or Environmental Justice.															
LSM for impact associated with interference with businesses during construction.															

References – Executive Summary

- Environmental Science Associates (ESA), 2014. Analysis of Historic and Future Coastal Erosion with Sea Level Rise, March 19, 2014.
- Department of Commerce, National Oceanic and Atmospheric Administration, 2017. Final Notice of a New Category of Special Use Permit Related to the Operation of Desalination Facilities Producing Potable Water for Consumption. 82 FR 42298, Thursday September 7, 2017.
- Geoscience Support Services, Inc. (Geoscience), 2015. Draft Monterey Peninsula Water Supply Project Groundwater Modeling and Analysis, April 17, 2015.
- Monterey Regional Water Pollution Control Agency (MRWPCA), 2015. *Draft Environmental Impact Report for the Pure Water Monterey Groundwater Replenishment Project*. April 2015.
- Ninyo & Moore, 2014. Preliminary Geotechnical Evaluation, Groundwater Replenishment Project EIR, Monterey County, California. December 2, 2014.
- RBF Consulting, 2013a. *Memorandum: Recommended Capacity for the Monterey Peninsula Water Supply Project (MPWSP) Desalination Plant*. January 7, 2013.
- RBF Consulting, 2013b. *Monterey Peninsula Water Supply Project (MPWSP) Project Description Update*. January 9, 2013.
- RBF Consulting, 2013c. *Monterey Peninsula Water Supply Project (MPWSP) Capital and O&M Cost Estimate Update*. January 9, 2013.
- State Water Resources Control Board (SWRCB), 2013. Final Report on Analysis of Monterey Peninsula Water Supply Project Proposed in Application 12-04-019 by California American Water Company, July 31, 2013.

This page intentionally left blank