

# MITIGATION MONITORING AND REPORTING PROGRAM

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## CalAm Monterey Peninsula Water Supply Project

As the CEQA and NEPA Lead Agencies, the CPUC and MBNMS, respectively, are responsible for ensuring the required mitigation measures are implemented appropriately and effectively. This Mitigation Monitoring and Reporting Program (MMRP) for the Project establishes the approach to successful implementation of the mitigation measures that were identified in the EIR/EIS and that have been required as conditions of Project approval. CalAm, as the Applicant and project proponent, will be responsible for implementing all mitigation measures, as well as any additional conditions imposed by any permits or regulations administered by other responsible or trustee agencies and for reporting the implementation to the Lead Agencies. Following project approval, a detailed Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) will be developed, as described in Section 5: MMCRP, to set forth additional details concerning how the CPUC will ensure appropriate implementation of the MMRP by CalAm.

**Table 1** of this MMRP is organized first by environmental topic/impact statements in the order they are presented in the EIR/EIS, with the mitigation measures identified for such impacts.

Table 1 includes:

- Mitigation measures that CalAm must implement as part of the approved project;
- Monitoring and reporting requirements;
- Effectiveness criteria in order to judge whether the mitigation measure achieves its intended results. If the mitigation measure does not achieve the intended results, then the CPUC and MBNMS may adjust the mitigation measure in consultation with the applicable responsible or trustee agency, as described in more detail in Section 3, Roles and Responsibilities; and
- Timing and location of implementation for each measure so as to clearly specify which element(s) of the Project trigger each mitigation measure.

## 1. Authority for the Mitigation Monitoring and Reporting Program

The California Public Utilities Code confers authority upon the CPUC to regulate the terms of service and the safety, practices, and equipment of utilities subject to its jurisdiction. It is CPUC practice, pursuant to its statutory responsibility, to protect the environment and to require that mitigation measures imposed as conditions of approval be properly implemented, monitored, and reported. This requirement is codified statewide in Public Resources Code (PRC) §21081.6, which requires a public agency to adopt a mitigation monitoring or reporting program when it approves a project that is subject to preparation of an EIR and where the EIR for the project identifies significant adverse environmental effects. CEQA Guidelines Section 15097 describes agency requirements for mitigation monitoring or reporting. This MMRP implements the CPUC's responsibilities under PRC §21081.6. This MMRP will also be used by MBNMS to track implementation of required mitigation measures within the sanctuary, in compliance with 32 CFR 651.15, which addresses mitigation and monitoring.

The purpose of the MMRP is to ensure the measures adopted to mitigate or avoid significant impacts of a project are implemented, and to report on their implementation. The MMRP can be a working guide to facilitate not only the implementation of mitigation measures by the project proponent, but also the monitoring, compliance, and reporting activities of the CPUC and MBNMS and any monitors they may designate.

## 2. Roles and Responsibilities

Responsibility for implementing the adopted mitigation measures rests with CalAm, unless otherwise specified in the mitigation measure.

As the Lead Agency under CEQA, the CPUC is responsible for monitoring an approved project to ensure that required mitigation measures are implemented. CPUC will be tracking the implementation of the mitigation measures and associated monitoring on behalf of MBNMS and the two Lead Agencies will coordinate on any issues relating to the monitoring reports. MBNMS will also plan to conduct random inspections for compliance of mitigation measures required of activities that may affect sanctuary resources. The purpose of the MMRP is to document that the mitigation measures required by the CPUC are implemented and that mitigated environmental impacts are reduced to the level identified in the EIR/EIS and the CEQA findings adopted by the CPUC. The CPUC may delegate duties and responsibilities for monitoring implementation to environmental monitors or consultants working on behalf of the CPUC (referred to as Third-Party Monitors).

While the implementation by CalAm of some of the mitigation measures will also require reporting to responsible or trustee agencies where areas or resources under their jurisdiction are potentially affected or involved, CalAm must ultimately demonstrate to the Lead Agencies that the mitigation measures have been appropriately implemented.

CalAm will deploy its monitors to ensure implementation of its commitments and execution of its responsibilities as detailed in the MMRP. The number of CalAm construction monitors assigned to the Project to meet the requirements of the MMRP will be determined by CalAm and will depend on the number of concurrent construction activities underway, their locations, and the types of resources potentially affected. Per this MMRP, CalAm is required to demonstrate to the Lead Agencies that all persons assigned monitoring duties and responsibilities are qualified to undertake those duties.

When a mitigation measure requires that a study or plan be developed during the design or pre-construction phase of the Project, CalAm must submit the final study or plan to CPUC and MBNMS for review and approval. Any study or plan that requires approval of the CPUC and MBNMS must allow at least 60 days for adequate review unless noted otherwise in the mitigation measure or the MMRP. Other agencies and jurisdictions with authority over aspects of the Project or particular resources may require additional review time. CalAm will be responsible for confirming to the Lead Agencies that appropriate agency reviews have occurred and required approvals were obtained.

## 2.1 Project Changes

This section describes the CPUC's process for staff approval of Project changes that may be necessary due to changes needed after the Applicant's final engineering of elements of the Project or if circumstances arise during the course of construction that require deviations from the Project as approved, including changes to mitigation measures listed herein. The CPUC's designated Project Manager, along with MBNMS and the Third-Party Monitors, will evaluate any proposed deviations from the approved Project to ensure they are consistent with CEQA and NEPA requirements. Depending on its nature, a requested deviation would be processed as a Minor Project Change (MPC) or a Petition for Modification (PFM). MPCs would be strictly limited to minor project changes that do not trigger additional permit requirements, do not increase the severity of an impact or create a new impact, and are within the geographic scope of the EIR/EIS. If a project change would create or have the potential to create a new significant impact, increase the severity of an impact, or occur outside the geographic area evaluated in the EIR/EIS, CalAm would be required to submit to the CPUC a PFM. The CPUC would evaluate the PFM under CEQA, as appropriate, to determine what form of supplemental environmental review, if any, would be required.

- Requests for CPUC Project Manager approval of a change must be made in writing and should include the following:
- A detailed description of the proposed change(s), including an explanation of why the deviation is necessary;
- Identification of the mitigation measure, project parameter, or other project attribute for which the change is being requested, and citations for associated approved documents;

- Photographs, maps, and other supporting documentation illustrating the difference between the existing conditions in the project area, the approved project, and the proposed change;
- The potential impacts of the proposed change, including a discussion of each environmental issue area that could be affected by the deviation with accompanying verification, and whether there would be an increase in significant impacts on resources affected by the Project and/or any new significant impacts, after application of previously adopted mitigation measure(s);
- Whether the change conflicts with any mitigation measures;
- Whether the change conflicts with any applicable guideline, ordinance, code, rule, regulation, order, decision, statute, or policy; and
- The date of expected construction at the location of the change.

The CPUC Project Manager may request additional information, agency consultations, or a site visit in order to determine the appropriate vehicle for approval and to process the request.

## 2.2 Enforcement Responsibility

The CPUC will be responsible for monitoring implementation of the MMRP and for enforcing the procedures adopted herein. Generally, this would be accomplished through the CPUC Energy Division CEQA Unit. The CPUC will also employ Third-Party Monitors to assist in certain efforts.

CalAm monitors will be required in some instances to coordinate the implementation of mitigation with the responsible or trustee agencies for situations falling within the purview of those agencies. In such instances, CalAm is required to demonstrate coordination with those agencies to the CPUC. The Third-Party Monitors will also coordinate with the appropriate responsible and trustee agencies or individuals to confirm compliance and effectiveness, or to coordinate on the need for further corrective actions.

As the State's regulator of investor-owned utilities, the CPUC has the authority to halt any construction, operation, or maintenance activity associated with the Project if the activity is determined to be a deviation from the approved project or from the adopted mitigation measures. As such, any member of the CPUC environmental monitoring team has the authority to issue a Stop Work Order that requires the contractors to temporarily halt or redirect Project activities if a sensitive resource is put in undue risk beyond previously authorized or permitted levels, and if mitigation measure(s) are not meeting the effectiveness criteria identified in the MMRP. In addition, a Stop Work Order may be issued if unauthorized Project activities are observed, such as the use of a work area that was not approved or if significant compliance risks remain unresolved. The CPUC will make any final determinations regarding Stop Work Orders for the Project.

## 2.3 Compliance Responsibility

CalAm will be responsible for successfully implementing all of the adopted mitigation measures, based on the criteria that define whether mitigation is successful, as provided in the table of mitigation measures below. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely.

Additional mitigation success thresholds may be established through the review and approval of specific plans required under mitigation measures. Other requirements may be stipulated by another agency with applicable jurisdiction during that agency's permitting process.

CalAm will inform the CPUC and the Third-Party Monitors in writing of any mitigation measures that are not being, or cannot be, successfully implemented and provide alternative approaches for successful mitigation implementation. The CPUC, in coordination with its Third-Party Monitors, will review the alternative approach to determine if it is adequate and whether an MPC or PFM would apply (see Section 2.1).

In cases where CalAm is found to be in non-compliance, the CPUC may exercise the CEQA Citation Program, adopted by the Commission in Resolution E-4550, which authorizes Commission staff to efficiently issue citations and levy fines when needed to quickly address non-compliance incidents occurring on the Project site.

## 3. Dispute Resolution

Even with the best preparation, disputes may occur. In such an event, the following procedure will be observed for dispute resolution between CPUC staff and the applicant:

- Disputes and complaints should be directed to the CPUC Project Manager for resolution
- Should this informal process fail, the CPUC Project Manager may initiate enforcement or compliance actions as described in Section 2.3 to address deviations from the approved project.

Parties may also seek review by the CPUC through existing procedures specified in the CPUC's Rules of Practice and Procedure for formal and expedited dispute resolution, although a good faith effort should be made to use the foregoing procedure first.

## 4. General Monitoring Procedures

### 4.1 Environmental Monitors

Many of the monitoring procedures will be conducted during the construction phase of the project. CalAm is responsible for appointing appropriately qualified on-site monitors as defined in the mitigation measures and MMRP, and for integrating mitigation monitoring activities into

the construction process. Qualified monitors are to be on-site during all fencing and ground disturbance activities, or as defined in the specific mitigation measures. The CPUC Project Manager and Third-Party Monitors will coordinate with MBNMS and with CalAm's on-site monitors to verify compliance with the MMRP, and the effectiveness of the mitigation.

The number of on-site construction monitors assigned to the Project will depend on the number of concurrent construction activities and their locations. The CPUC, MBNMS, or their designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

## 4.2 Construction Personnel

A key element in the success of mitigation implementation and mitigation monitoring is the full cooperation of construction personnel and supervisors. Successful implementation of many of the mitigation measures requires specific actions and behaviors on the part of the construction supervisors or crews. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by construction companies engaged to do the work will be written into their contracts with CalAm. Procedures to be followed by construction crews will be written into a separate agreement that all construction personnel will be asked to sign, denoting consent to the procedures.
- As specified by the MMRP, a Worker Environmental Awareness Training and Education Program will be conducted to inform and train construction personnel about the requirements of the monitoring program. The CPUC Third-Party Monitors will verify that each crew member receives the required training.
- A written summary of mitigation monitoring procedures will be provided to construction supervisors for all mitigation measures requiring their attention.

## 4.3 Reporting Procedures

CalAm is required to prepare and maintain daily monitoring reports that are entered into a field record environmental database (FRED) or similar system, and made available to the CPUC and MBNMS. CalAm will also provide the CPUC and MBNMS (or their Third-Party Monitors) with written weekly, monthly and quarterly summary reports of the Project construction activities, which shall include a chronological log including the progress of construction, and all monitoring activities conducted during the reporting period including the identification of any impacts on resources, mitigation measures implemented, and all other noteworthy elements of the Project.

Construction is not allowed to start in a particular area until the required pre-construction surveys and flagging/staking are completed, and the CPUC Third-Party Monitor has validated compliance and the CPUC has issued a Notice to Proceed to CalAm to start that construction.

## 4.4 Public Access to Records

The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CPUC upon request. The CPUC and CalAm will develop a filing and tracking system. For additional information on mitigation monitoring and reporting for the project, the CPUC Energy Division CEQA Unit will maintain an Internet website. To facilitate the public's awareness of and access to this information, the CPUC will make monthly reports available on the website.

## 5. Mitigation Monitoring, Compliance, and Reporting Program

The CPUC will prepare the Mitigation Monitoring, Compliance, and Reporting Program (MMCRP) in cooperation with MBNMS in order to meet both agencies' mitigation monitoring and reporting needs. The MMCRP will incorporate and will be based on this MMRP. The MMCRP will serve as a self-contained guide for implementing the MMRP throughout Project construction. The MMCRP will include more detailed content than is required for compliance with PRC §21081.6, it will incorporate the mitigation monitoring and reporting needs of other agencies that have yet to take action on the Project, and it will include agency, applicant, and third-party contact information that cannot be known with specificity at this time. The CPUC Project Manager, in coordination with MBNMS, will approve the completed MMCRP prior to the start of Project construction.

The MMCRP will contain a concise overview and description of the approved Project, outline its physical locations and geographic limits, and, to the extent known, provide the Project construction schedule. It will include all adopted mitigation measures and will specify the master reference document(s) that the monitors and CalAm will use in carrying out the MMRP (e.g., the Final EIR/EIS, detailed working maps and plans, issued permits, etc.).

The MMCRP will include a list of the agencies having jurisdiction over various aspects of the Project, and a description of where these respective jurisdictions occur. For example, the MMCRP will state which CDFW regional office has jurisdiction and will provide contact information, including the designated representative's name, address, email, and telephone numbers.

The MMCRP will also define the manner in which CalAm's monitoring team will interact with the CPUC staff and consultants. In addition, the MMCRP will define CalAm's required submittals to the agencies, and protocol for interactions among agency and CalAm team members.

The MMCRP must address the following topics, and others as deemed appropriate:

1. Introduction
  - a. Authority and Purpose of the MMCRP
  - b. Jurisdictional Agencies

- c. Project Description
  - d. Organization of the MMCRP
2. Roles and Responsibilities
- a. Monitoring Responsibility
  - b. Enforcement Responsibility
  - c. Mitigation Compliance Responsibility
  - d. Communications
  - e. Dispute Resolution
  - f. CalAm Roles
    - i. Identification of the qualified CalAm team members who would verify that all adopted measures and conditions have been successfully implemented.
    - ii. Organization of the CalAm team, including specifying duties, roles, and responsibilities.
    - iii. Identification of primary CalAm contacts for CPUC environmental monitoring staff liaison.
3. General Monitoring and Compliance Procedures
- a. Environmental Monitors
  - b. Construction Personnel
  - c. General Reporting Requirements
    - i. CalAm Daily Incident Summary format and protocol
    - ii. CalAm Weekly Monitoring Report format and content
    - iii. CalAm Annual Monitoring Report format and content
  - d. Records Management and Public Access to Records
4. Mitigation Measure Tables



**TABLE 1  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria	
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<b>Section 4.2: Geology, Soils, and Seismicity</b>										
<b>Impact 4.2-1: Substantial soil erosion or loss of topsoil during construction.</b> Mitigation Measures 4.6-2b and 4.16-1										
<b>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.</b> Mitigation Measure 4.2-10: Slant Well Abandonment Plan.	X									
CalAm shall monitor and report the rate of coastal retreat and implement the following corrective measure: 1. CalAm shall conduct annual monitoring of the rate of coastal retreat relative to the slant wells at the CEMEX site by measuring the distance from the wellhead to the western dune face. The data shall be reported no later than June 30 each year to the agencies issuing and authorizing the Coastal Development Permit and shall establish an annual erosion rate to be used to estimate the year at which the wells and associated pipelines have 5 years before exposure, assuming that at least one 100-year storm event will have occurred within that exposure timeframe. 2. Beginning at least 5 years prior to the anticipated exposure of the slant wells, CalAm shall implement the planning and permitting necessary to decommission the slant wells in accordance with state well destruction standards. An application to destroy the slant well would be submitted to the Monterey County Environmental Health Bureau, Drinking Water Protection Services Unit, for approval. The decommissioning plans shall be prepared in coordination with the property owner and permit authorizing agencies. 3. Once an estimated exposure window is established through annual monitoring and a removal date is identified, CalAm shall remove the slant wells from service prior to their exposure. Slant well decommissioning activities would be restricted to the snowy plover non-nesting season (October 1 through February 28) to avoid impacts on nesting plovers and other sensitive species. The wellhead vault, electrical panel, buried electrical conduit, and discharge piping would all be excavated and removed, followed by backfilling and compaction of the excavated vault location and trenches. The well decommissioning shall be conducted in coordination with the property owner. 4. The slant well casing shall be pressure grouted such that the screened section is sealed, pursuant to the requirements of State of California Well Standards Bulletin 74-81 and 74-90, Part III Section 23. The section of well casing and pipelines at risk of exposure shall be cut and removed to a depth of five feet below the 2060, 100-year lower profile envelope as determined by the 2014 Coastal Erosion Study (ESA, 2014) or as directed by any permit condition.	X									
<b>Impact 4.2-C: Cumulative impacts related to geology, soils, and seismicity.</b> Mitigation Measure 4.2-10	X									
<b>Section 4.3: Surface Water Hydrology and Water Quality</b>										
<b>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.</b> Mitigation Measure 4.7-2b	X			X						

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<p><b>Section 4.3-3: Surface Water Hydrology and Water Quality (cont.)</b></p> <p><b>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.</b></p> <p><b>Mitigation Measure 4.3-4: Operational Discharge Monitoring, Analysis, Reporting, and Compliance.</b></p> <p>To ensure that the operational discharges from the MPWSP are in compliance with the 2 ppt receiving water salinity limitation at the Brine Mixing Zone (BMZ) compliance point required by the California Ocean Plan, the discharger(s) shall implement a Monitoring and Reporting Plan (Plan). The Plan shall, at a minimum, include protocols for monitoring of effluent and receiving water salinity characteristics as well as protocols for determining statistically significant changes in benthic community composition within the maximum extent of the Zone of Initial Dilution (ZID) as compared to baseline conditions (established a minimum of one year prior to operations) that is directly associated with changes in salinity resulting from operational discharges (with consideration given to natural and seasonal variations and long-term regional trends). Such protocols shall include, but not be limited to, monitoring for benthic community health, aquatic life toxicity, and hypoxia, within the ZID. The Plan shall be consistent with the standard monitoring procedures detailed in Appendix III of the Ocean Plan. Such monitoring protocols specify monitoring plan framework, scope, and methodological design for determining compliance with the Ocean Plan defined receiving water limitations relating to salinity. Prior to implementation, the Plan shall be approved by the RWQCB and MBNMS. Following implementation, the Plan shall be reviewed by the RWQCB, and revised if necessary, as part of the NPDES permit renewal process.</p> <p>As part of the Plan, receiving water monitoring for salinity shall be conducted at times when the monitoring locations are most likely to be potentially adversely affected by the discharge. The Plan shall establish protocols to establish baseline biological conditions at the discharge location as well as at a reference location outside the influence of the discharge for at least one year prior to commencement of project construction. To determine impacts on marine biological resources against baseline biological conditions, the discharger(s) shall conduct biological surveys (e.g., Before-After Control-Impact studies), that evaluate and quantify the differences between biological communities at a reference site and at the discharge location before and after the discharge(s) commence. All monitoring data, results, and analyses shall be compiled and submitted to the RWQCB and MBNMS for review. Such monitoring shall continue until the RWQCB and MBNMS determines that a regional monitoring program is adequate to ensure compliance with the receiving water limitation.</p> <p><b>Water Quality Monitoring.</b> At a minimum, the Plan shall include the following water quality monitoring protocols and monitoring frequencies to assess baseline conditions and to track the compliance of the Project with the performance standard of ensuring operational discharges do not exceed ambient salinity by more than 2 ppt at the edge of the BMZ, as well as to assess the efficacy of any operational or design features implemented:</p> <p>A. At least one year prior to implementing operational discharges, the discharger(s) shall install continuously recording automated water quality monitoring equipment, such as automatically recording water quality data sondes (water quality monitoring instrument), to monitor salinity and dissolved oxygen levels at one hour intervals in the receiving waters of Monterey Bay. The discharger(s) shall install water quality monitoring equipment at a minimum of four locations within 3 meters of the ocean floor as follows:</p> <ol style="list-style-type: none"> <li>1 monitoring station at the edge of the Zone of Initial Dilution, but not more than 10 meters from the outfall diffuser.</li> <li>1 monitoring station at the edge of the Brine Mixing Zone, representing the point of compliance with the Ocean Plan salinity standard (not more than 100 meters from the outfall diffuser).</li> <li>A representative reference location at least 1000 meters from the outfall diffuser, situated on the same elevation contour as that of the outfall diffuser, in an area outside the influence of operational discharges or other inputs to Monterey Bay, such as operational discharges from other facilities or fresh water inputs in the form of major surface water inputs.</li> </ol> <p>B. Monitoring will be conducted for one year prior to the commencement of operational discharges to confirm baseline conditions.</p>	X						<p>CalAm shall prepare and submit the required water quality monitoring and reporting plan to RWQCB and MBNMS for approval, and provide a copy of the approved plan to the CPUC. Upon receiving the approvals and providing the CPUC with copies of the same, CalAm shall install monitoring equipment and begin water quality monitoring pursuant to the approved plan at least 1 year before the commencement of project operations. CalAm shall only use qualified professionals approved by RWQCB, CPUC and MBNMS for all required monitoring and analysis and shall promptly submit the required monitoring data and analysis to the RWQCB, CPUC, and MBNMS simultaneously. Review of the monitoring data and reports will identify the need for and details concerning any corrective measures, unless and until it is determined that it is no longer required, per the mitigation measure.</p> <p>For the required biological surveys, survey protocols and qualifications for professionals conducting the surveys shall be submitted to MBNMS for approval. Survey reports shall be submitted to MBNMS in a format approved by MBNMS.</p>	<p>Prior to and during operation at intervals specified in the mitigation measure.</p>	<p>Establish and incorporate comprehensive biological resources baseline data into the approved water quality monitoring and reporting plan and implement the plan, and revise it as deemed necessary by RWQCB and MBNMS, to ensure compliance with the 2 ppt receiving water quality limitation at the BMZ.</p>

**TABLE 1 (Continued)  
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<p><b>Section 4.3: Surface Water Hydrology and Water Quality (cont.)</b></p> <p>C. Once operational discharges commence, the discharger(s) shall continue monitoring (for a minimum of five years, as described below) to confirm compliance of operational discharges with the Ocean Plan receiving water salinity limitation, which specifies discharges shall not exceed a daily maximum of 2 parts per thousand (ppt) above natural background salinity, as measured no further than 100 meters (328 ft) horizontally from the discharge point.</p> <p>The discharger(s) shall retrieve all data from deployed water quality monitoring instrumentation at least four times a year at quarterly annual intervals during both the one-year period of baseline monitoring and during the salinity standard compliance monitoring associated with operations. Following data collection, data shall be analyzed for compliance with the receiving water salinity standard defined in the Ocean Plan. Additionally, the salinity and dissolved oxygen data retrieved shall be used, in conjunction with biological survey data, to assess changes to benthic community composition within the ZID. The analyses and monitoring data shall be summarized and submitted to the RWQCB and MBNMS as annual reports as well as made publicly available via the project website. Reports shall include summary graphs of all quality assured/quality controlled data as well as statistical analyses of the data relative to historic baselines. Reports shall assess water quality data within the context of relevant water quality standards. The reports shall describe any measured adverse water quality related changes, such as high salinity or low dissolved oxygen levels that potentially impact marine habitat quality or benthic communities. The reports shall include assessment of the extent to which any measured changes were attributable to controllable factors, such as the variation of combined flows as part of operational discharges.</p> <p>The analysis and reporting conducted as part of the Plan shall determine the need for corrective actions to be implemented in the form of the design features and operational measures prescribed in <b>Mitigation Measure 4.3-5</b> to reduce identified impacts to less-than-significant levels. As part of such a determination for implementation of corrective actions, a schedule for implementation shall be provided, as well as rationale for how such design features and/or operational measures were selected and the expected results following implementation. All analysis and reporting, including determinations for the need for corrective actions to be implemented, the schedule for implementation, and the rationale for selected corrective actions shall be approved by the RWQCB and MBNMS. If at the end of five complete years of monitoring operational discharges, the 24-hour average salinity measured at the edge of the BMZ is less than 75% of the salinity performance standard for 45 days without interruption under all discharge scenarios representative of typical operations (i.e. irrigation season and non-irrigation season operations), and with approval by the RWQCB and MBNMS, the discharger(s) may terminate the monitoring and reporting specified as part of this mitigation measure (but not terminate monitoring and reporting required as part of compliance with NPDES permit conditions or Ocean Plan monitoring and reporting requirements for discharges into California ocean waters).</p> <p><b>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.</b></p> <p><b>Mitigation Measure 4.3-5: Implement Protocols to Avoid Exceeding Water Quality Objectives.</b> <b>Compliance with Water Quality Objectives.</b> Prior to MPWSP operations, and as part of the Monterey One Water (M1W, formerly MRWPCA) NPDES Permit amendment process (Order No. R3-2014-0013, NPDES Permit No. CA0048551), the permittee shall complete a water quality assessment. As part of the water quality assessment, the permittee shall:</p> <ul style="list-style-type: none"> <li>Quantify the projected final design discharge volume(s) by month based on project design and historic and projected monthly wastewater discharge volumes.</li> <li>Collect samples of the source waters and operational discharges and analyze them in a certified laboratory for the constituents listed in Table 1 of the California Ocean Plan (Ocean Plan Water Quality Objectives). Sampling must be completed in accordance with protocols approved by the US EPA and RWQCB.</li> </ul>							X	X	<p>RWQCB to review and enforce NPDES permit for brine discharge. CaAm's water quality assessment shall be reported to and reviewed by RWQCB, CPUC, and MBNMS to demonstrate compliance with the NPDES permit conditions and related Ocean Plan requirements.</p>	<p>Prior to and during operation</p>	<p>Compliance with NPDES permit and related Ocean Plan requirements.</p>

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	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: Cal/Am Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<p><b>Section 4.3: Surface Water Hydrology and Water Quality (cont.)</b></p> <ul style="list-style-type: none"> <li>Demonstrate compliance for the full range of regulated water quality constituents specified in the Ocean Plan and NPDES water quality requirements in the context of minimum initial dilution values at the edge of the Zone of Initial Dilution (ZID) for the point of discharge.</li> </ul> <p>If the results of the water quality assessment and waste disposal study find that operational discharges will not meet the NPDES water quality requirements, including the Ocean Plan receiving water limitation for salinity, at the edge of the zone of initial dilution (ZID) and the Brine Mixing Zone (BMZ), respectively (incorporated here as performance standards), then the MPWSP operational discharges shall not be released as proposed. Such operational discharges shall be subject to additional design features, engineering solutions, and/or operational measures to reduce the concentration of water quality constituents to be in conformance with the Ocean Plan water quality objectives and NPDES permit requirements at the edge of the ZID or BMZ, as applicable. Such necessary design features and operational measures shall either be implemented individually or in combination to achieve compliance (unless the RWQCB determines that different but equally effective measures be employed). Such possible additional design features and operational measures include:</p> <ol style="list-style-type: none"> <li><b>Retrofitting the existing outfall to increase dilution:</b> If this operational measure is implemented, the dischargers shall retrofit the outfall diffuser to include inclined diffuser jets positioned at the optimum angle to achieve maximum dilution.</li> <li><b>Additional pre-treatment of source water to the Desalination Plant:</b> Feasible methods to remove polychlorinated biphenyls (PCBs) and other organic compounds from the source water include additional filtration or use of granular activated carbon (GAC) - a U.S. Environmental Protection Agency-approved method.</li> <li><b>Treatment of discharge:</b> The dischargers must consider one or more of the alternative feasible methods that remove residual compounds from the discharge to meet water quality objectives at the edge of the ZID. These methods include the following:             <ol style="list-style-type: none"> <li>Use of GAC (similar to that under the additional pre-treatment of source water described above, but here such treatment would be applied to the effluent following processing at the desalination facility instead of to the source water from the slant wells); or</li> <li>Advanced oxidation with ultraviolet light with concurrent addition of hydrogen peroxide.</li> </ol> </li> <li><b>Flow Augmentation:</b> If this operational measure is implemented, the dischargers shall decrease the density difference of the discharge and the receiving water through the addition of up to 5 mgd of flows with densities close to freshwater to increase the minimum dilution of dense discharges.</li> <li><b>End gate modification:</b> If this operational measure is implemented, the dischargers shall retrofit the outfall diffuser end gate to replace the existing opening with a minimum of one 6-inch Tidellex (or similar) check valve (Hydraulic Code 355) installed at an inclined (upward) angle greater than 20°, with an optimum angle of 60° to maximize dilution.</li> </ol>										
<p><b>Impact 4.3-C: Cumulative impacts related to surface water hydrology and water quality.</b> <b>Mitigation Measures 4.3-4, 4.3-5, and 4.7-2b</b></p>	X						See above under Mitigation Measures 4.3-4 and 4.3-5, and below under Mitigation Measure 4.7-2b			

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.4: Groundwater Resources</b></p> <p><b>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.</b></p> <p><b>Applicant Proposed Measure 4.4-3: Groundwater Monitoring and Avoidance of Well Damage.</b></p> <p>Prior to the start of MPWSP slant well construction, CalAm, working with MCWRA, shall develop a groundwater monitoring and reporting program (the "Program") to the satisfaction of MCWRA. All costs of Program development and implementation shall be borne by CalAm either directly or through funding of MCWRA's staff, consultants and Program activities. The Program shall augment the MCWRA's existing regional groundwater monitoring network to focus on the area that could be affected by the proposed slant wells. The geographic area of the Program shall be within the model domain of the North Marina Groundwater Model, also referred to as NMGWModel and include the Dune Sand Aquifer, the 180-Foot Aquifer, the 400-Foot Aquifer and the Deeper Aquifer (i.e., the 900-Foot Aquifer) of the Salinas Valley Groundwater Basin (the "Monitoring Area"). The purpose of the Program is to ensure that owners of existing public or private groundwater supply wells within the Monitoring Area on the date the MPWSP commences slant well pumping ("Active Supply Wells") suffer no harm as a result of MPWSP slant well pumping. The elements of the Program proposed under this measure are described below.</p> <ol style="list-style-type: none"> <li>1. A network of monitoring wells has been completed on and near the CEMEX property as part of the CalAm test slant well project. These well clusters monitor water elevation and quality at various depth intervals within the Dune Sand Aquifer, the 180-Foot Aquifer, and the 400-Foot Aquifer and shall be included in the Program's monitoring network. These existing monitoring wells are subject to relocation, replacement, or substitution by new or other monitoring wells developed as part of the Program as determined by MCWRA.</li> <li>2. In addition, using information from the Groundwater Extraction Management System (GEMS) maintained by MCWRA and from the State Water Resources Control Board's Division of Drinking Water, CalAm, in coordination with MCWRA, shall identify Active Supply Wells in the Monitoring Area and offer to owners of identified Active Supply Wells the opportunity to participate in the Program for groundwater elevation and water quality monitoring. The owners of Active Supply Wells in the Monitoring Area will receive at least 60 days' notice (via email, if available, and via certified mail) of the opportunity to participate in the Program, and may elect in writing to participate in the Program as to their Active Supply Wells ("Participating Active Supply Wells"). This opt-in process must occur sufficiently in advance of MPWSP slant well pumping so that information on pre-MPWSP conditions can be obtained for each Participating Active Supply Well. Prior to the start of MPWSP slant well pumping, an independent California-certified hydrogeologist retained and directed by MCWRA (the "Hydrogeologist") shall evaluate the conditions and characteristics (e.g., well depth, well screen interval, pump depth and condition, flow rates, and drawdown) of each Participating Active Supply Well to develop pre-pumping data for each well. Water elevation and quality monitoring pursuant to the Program shall begin following initial groundwater well assessment, and shall continue at intervals specified in the Program (e.g., more frequently at the beginning of MPWSP slant well pumping and less often after stabilization of groundwater levels) until the well owner ceases pumping from the monitored well, or until the well owner agrees that monitoring is no longer required.</li> <li>3. Prior to the start of MPWSP slant well pumping, CalAm and MCWRA shall review the current (as updated if needed) inventory of monitoring wells within the Monitoring Area, and identify locations within the Monitoring Area lacking monitoring coverage and that warrant monitoring in order to evaluate potential effects on Participating Active Supply Wells from MPWSP slant well pumping. Based upon that review, MCWRA may require that CalAm fund the installation of new monitoring wells in the Monitoring Area to be installed before MPWSP slant well pumping begins. The number of new monitoring well sites in the Monitoring Area and the location of those new monitoring well sites shall be determined by MCWRA. The area of groundwater monitoring under the Program may be extended outside of the Monitoring Area if warranted to evaluate potential MPWSP slant well pumping effects on Participating Active Supply Wells and recommended by the Hydrogeologist.</li> </ol>	X						<p>CalAm shall prepare the Program to be reviewed and approved by MCWRA. The MCWRA-approved Program will be sent to CPUC for confirmation prior to operation of the slant wells. CPUC will monitor and review procedures to prevent harm to local groundwater supply well owners and ensure their receipt of replacement water, as directed in the mitigation measure.</p>	<p>Prior to and during operation</p>	<p>No harm or injury to existing active groundwater supply wells.</p>

TABLE 1 (Continued)  
 CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Conveyance		
<p><b>Section 4.4: Groundwater Resources (cont.)</b></p> <p>4. The groundwater data developed through the Program shall be collected by or provided to MCWRA at intervals identified in the Program, but in no event longer than 45 days from such data being obtained, to evaluate whether MPWSP slant well pumping is causing consistent and measurable drawdown of local groundwater levels that is distinguishable from seasonal or multi-year groundwater level fluctuations. In the event that MCWRA identifies a consistent and measurable drawdown in groundwater levels and determines that such drawdown is potentially attributable to MPWSP slant well pumping and independent of seasonal or multi-year groundwater level fluctuations or any regional trends, the Hydrogeologist shall then determine if the observed degree of drawdown would damage or otherwise adversely affect any existing Participating Active Supply Wells. Adverse effects from lowered groundwater levels in Participating Active Supply Wells may include water elevation acute and long-term declines that draw water below pump intakes, causing cavitation due to exposure of the well screen, reduced well yields and pumping rates, increased energy costs to power the well, or changes in groundwater quality indicating that MPWSP slant well pumping is drawing lower quality water toward the well. Active Supply Wells that are not Participating Active Supply Wells will be considered for a determination by the Hydrogeologist of potential damage or adverse effects reasonably attributable to MPWSP slant well pumping (as described above) if substantial, credible evidence is submitted by the owners of such Active Supply Wells concerning damage or adverse effects at such wells, and such effects are verified by CalAm and the Hydrogeologist.</p> <p>If the Hydrogeologist determines that a Participating Active Supply Well or an Active Supply Well that CalAm and the Hydrogeologist have verified for damage or adverse effects pursuant to Section 4 above, has been damaged or otherwise negatively affected by MPWSP slant well pumping, CalAm and the Hydrogeologist shall coordinate with the well owner to develop and implement a mutually agreed upon course of action. Such course of action may include but not be limited to repairing or deepening the existing well, restoring groundwater yield by improving well efficiency, facilitating an interim or long-term replacement of water supply, constructing a new well, or compensating the owner for increased pumping costs. Any interim or long-term replacement water supply shall be of the same or better quality (i.e., potable or non-potable) and predicted quantity as the existing supply of the Active Supply Well and shall be suitable for the purposes served by the existing Active Supply Well. Before CalAm undertakes any course of action to remedy the MPWSP notice of such action to MCWRA, Applicant Proposed Measure 4.4-3 would monitor changes in the groundwater surface elevations caused by the proposed pumping at the slant wells through a voluntary program and use of new groundwater monitoring wells. If it is determined that the project is causing groundwater levels to damage local active wells within the Dune Sand, 180-Foot/FE, 400-Foot Aquifer or Deeper Aquifer, this measure would ensure that active wells are repaired or replaced. Implementation of Applicant Proposed Measure 4.4-3 is not necessary to address any significant project effect.</p>									
<p><b>Impact 4.4-4: Violate any groundwater quality standards or otherwise degrade groundwater quality during operations.</b></p> <p><b>Mitigation Measure 4.4-4: Groundwater Monitoring and Avoidance of Impacts on Groundwater Remediation Plumes.</b></p> <p>Prior to the start of MPWSP construction, CalAm shall incorporate the future quarterly groundwater elevation monitoring results for the OUCTP A-Aquifer and 180-Foot Aquifer (upper and lower) plumes into the well monitoring program described above in Applicant Proposed Measure 4.4-3 until the two OUCTP plumes have been appropriately remediated and the RWQCB no longer requires remediation activities. Groundwater elevation data shall be obtained from the periodic monitoring reports developed by the U.S. Army and its contractors. The elements of the additions to the groundwater monitoring program proposed under this mitigation measure are described below.</p> <ul style="list-style-type: none"> <li>CalAm shall incorporate into its well monitoring program (described above for Applicant Proposed Measure 4.4-3), the most recent monitoring reports available through the U.S. Army and its contractors for the monitoring wells that are necessary to characterize the flow direction and water quality of the three OUCTP plumes located in the A-Aquifer, the Upper 180-Foot Aquifer and the Lower 180-Foot Aquifer.</li> </ul>	X							<p>CalAm will conduct quarterly groundwater monitoring program to monitor the potential effect of drawdown on the OUCTP plumes prior to their remediation. Results of the monitoring program will be incorporated in the MCWRA-approved Program and sent to CPUC for review. CalAm will coordinate with the U.S. Army on the monitoring program results. CalAm will inform U.S. Army, RWQCB, DTSC and U.S. EPA, and CPUC simultaneously if the monitoring program results show the 1-foot contour approaching the OUCTP plumes. CalAm, in coordination with the U.S. Army, RWQCB, DTSC, and U.S. EPA, are responsible for developing a plan if drawdown affects remediation of the plumes.</p>	
								<p>Prior to and during operation</p>	<p>No intersection with or impact on the OUCTP plumes by slant well pumping.</p>

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.4: Groundwater Resources (cont.)</b></p> <ul style="list-style-type: none"> <li>The groundwater elevation results shall be evaluated by CalAm and its consultants on a quarterly basis to assess whether the -1-foot drawdown contour from the proposed subsurface intake system is approaching the edge of the OUCTP plumes. CalAm shall continuously coordinate with and include the U.S. Army in all pertinent correspondence during the groundwater data evaluation stages. If the analysis concludes that the slant well pumping could intersect or could influence the flow direction of the OUCTP plumes, then CalAm shall contact the U.S. Army, the Regional Water Quality Control Board – Central Coast Region, the California Department of Toxic Substance Control, and the U.S. EPA to initiate communications and develop and implement a plan to either stop or decrease the pumping to prevent any impact on the OUCTP plumes. In the unlikely event that an impact does occur, CalAm shall bear the necessary additional costs to address changes in the plume flow direction, arrest migration of the plumes, and/or to remediate areas of new contamination created by slant well pumping. CalAm shall consider using existing groundwater remediation and monitoring wells that remain on the site to expand the existing treatment systems.</li> <li>When the ongoing remediation of the OUCTP plumes has been completed and the RWQCB authorizes closure of the two OUCTP plumes remediation activities, this mitigation measure shall no longer apply.</li> </ul>									
<p><b>Section 4.5: Marine Biological Resources</b></p> <p><b>Impact 4.5-C1: Cumulative impacts on marine biological resources.</b></p> <p>Mitigation Measure 4.3-4</p>	X						See above under Mitigation Measure 4.3-4		
<p><b>Section 4.6: Terrestrial Biological Resources</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1a: Retain a Lead Biologist to Oversee Implementation of Protective Measures.</b></p> <p>Prior to initiation of construction, CalAm and/or representatives of CalAm shall retain a qualified Lead Biologist to oversee compliance with avoidance and minimization measures for all special-status species and sensitive habitats. The Lead Biologist shall be onsite, or shall appoint qualified biologists and/or qualified biological monitors to be onsite, during all fencing and ground disturbance activities. The Lead Biologist, qualified biologists, and qualified biological monitors shall be subject to approval by resource agencies with jurisdiction over the special-status species with potential to occur at the project site (and local agencies, if required). Only the Lead Biologist and/or qualified biologists may lead protocol surveys and relocate special-status species, as authorized by the resource agencies with jurisdiction over these species.</p> <p>In the event that construction-related activities have the potential to violate the prescribed special-status species and habitat protection measures, the project Lead Biologist, or other appointed qualified biological monitors shall report to construction or operational site supervisors with authority to stop work to prevent any violations. Work shall proceed only after the construction-related hazards to special-status species and habitats are removed. If a special-status wildlife species is present, work shall proceed only if the species is no longer at risk of injury or death. Violations shall be thoroughly documented as part of compliance monitoring activities.</p> <p>The Lead Biologist shall ensure that all compliance monitoring activities are documented on a daily basis, and shall prepare a summary monitoring report on a monthly basis to be submitted to regulatory agencies upon their request. The monthly summary monitoring report shall provide information regarding the worker awareness training (see Mitigation Measure 4.6-1b below), surveys, and any observed special-status species, including any accidental injuries or fatalities. The monthly report shall also document the effectiveness and practicality of the prescribed avoidance and minimization measures and recommend modifications to the measures if needed. The Lead Biologist shall supply agency staff with copies of compliance records, including any reports of non-compliance, upon request.</p>	X		X	X	X	X	CalAm will secure approvals from all resource agencies, with jurisdiction of special-status species with potential to occur on the Project site, of the qualifications and the retention of a Lead Biologist. In addition, CalAm will secure approvals for any qualified biologists and qualified monitors from the same resource agencies. CalAm will provide CPUC with copies of the approvals for the Lead Biologist, qualified biologists, and qualified monitors to CPUC prior to project construction. CalAm will provide daily and monthly compliance summary monitoring reports containing all information required by the mitigation measure to the resource agencies and CPUC.	X	No violation of prescribed special-status species and habitat protection measures, and if work is stopped to prevent any such violation, work shall proceed only after the construction-related hazards to special-status species and habitats are removed (i.e., the species is no longer at risk of injury or death).

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria	
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carnel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures			Implementation Schedule
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>The Lead Biologist shall have in her/his possession a copy of all compliance measures while work is being conducted onsite, and shall ensure that CalAm's onsite representatives and contractors also maintain copies of the compliance measures on the site. To facilitate the Lead Biologist's role, CalAm shall ensure that the Lead Biologist is fully apprised of all decisions that change or materially affect the schedule, methods, and location of work that is subject to the protective measures for biological resources.</p> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1b: Construction Worker Environmental Awareness Training and Education Program.</b></p> <p>Prior to starting work, all construction workers at the project areas shall attend a Construction Worker Environmental Awareness Training and Education Program developed and presented by the Lead Biologist, appointed qualified biologist, and/or qualified biological monitor. The program shall include information on each federal and state-listed species, as well as other special-status wildlife and plant species and sensitive natural communities that may be encountered during construction activities. The training shall include: information on special-status species' life history and legal protections; the definition of "take" under the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA); the measures CalAm and/or its contractors have committed to implementing to protect special-status species and sensitive natural communities; reporting requirements and communication protocols; specific measures that each worker shall employ to avoid "take" of special-status species; and penalties for violation of FESA and/or CESA. Training shall be documented as follows:</p> <ol style="list-style-type: none"> <li>An acknowledgement form shall be signed by each worker indicating that environmental training has been completed.</li> <li>A sticker shall be placed on hard hats indicating that the workers have completed the environmental training. Construction workers shall not be permitted to operate equipment within the construction area unless they have attended the training and are wearing hard hats with the required sticker.</li> <li>A copy of the training transcript/training video and/or DVD, as well as a list of the names of all personnel who attended the training and copies of the signed acknowledgement forms, shall be submitted to the CPUC.</li> </ol> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1c: General Avoidance and Minimization Measures.</b></p> <p>CalAm's construction contractor(s) shall implement the following general avoidance and minimization measures to protect special-status species and sensitive natural communities at the facility sites during construction.</p> <ol style="list-style-type: none"> <li>The construction footprint, staging areas, equipment access routes, and disposal or temporary placement of spoils, shall be delineated with stakes and flagging prior to construction to avoid natural resources outside of the project area. Any construction-related disturbance outside of these boundaries, including driving, parking, temporary access, sampling or testing, or storage of materials, shall be prohibited without explicit approval of the Lead Biologist.</li> <li>New access driveways shall not extend beyond the delineated construction work area boundary. Construction vehicles shall pass and turn around only within the delineated construction work area boundary or local road network. Where new access is required outside of existing roads or the construction work area, the route shall be clearly marked (i.e., flagged and/or staked) prior to being used, subject to review and approval of the Lead Biologist.</li> <li>Vehicle speeds within the project area shall not exceed 15 miles per hour on roads within the sites.</li> </ol>	X		X	X	X	X	X	<p>CalAm will incorporate contract conditions requiring their contractors' employees to attend the required Construction Worker Environmental Training and Education Program and provide CalAm with signed copies of the contracts prior to construction. CalAm will provide a copy of the transcript and/or DVD developed and presented by CalAm's Lead Biologist containing all components of the required Construction Worker Environmental Training and Education Program and the names and signed acknowledgement forms of all construction workers that completed the Program to CPUC prior to construction.</p>	<p>Prior to construction activities and subsequent maintenance activities at the slant well sites.</p>	<p>All construction workers complete Construction Worker Environmental Training and Education Program and only those workers with a sticker on their hard hat so indicating are permitted to operate equipment within the construction area.</p>



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipeline Conveyance	Monitoring and Reporting Actions: Cal/Am Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.6: Terrestrial Biological Resources (cont.)</b>									
4. Excavated soils shall be stockpiled in disturbed areas lacking native vegetation. Stockpile areas shall be marked by the Lead Biologist to define the limits where stockpiling can occur.									
5. Standard best management practices (such as setbacks and use of silt fences and fiber rolls) shall be employed to prevent loss of habitat due to erosion caused by project related impacts (i.e., grading or clearing for new roads). All detected erosion shall be remedied immediately upon discovery.									
6. Fueling of construction equipment shall take place within existing paved areas, and at least 50 feet from drainages (including streams, creeks, ditches, culverts, or storm drain inlets) and native habitats. Contractor equipment shall be checked for leaks prior to operation and repaired when leaks are detected. Fuel containers shall be stored within appropriately-sized secondary containment barriers.									
7. The introduction of exotic plant species shall be avoided through physical or chemical removal and prevention. Measures to prevent the introduction of exotic plants into the construction site via vehicular sources shall include implementing Track clean or other method of vehicle cleaning for vehicles coming to the site and leaving the site. Earthmoving equipment shall be cleaned prior to transport to the project area. Weed-free rice straw or other certified weed-free straw shall be used for erosion control. Weed populations introduced into the site during construction shall be eliminated by chemical and/or mechanical means approved by California Department of Fish and Wildlife (CDFW) and the United States Fish and Wildlife Service (USFWS).									
8. Use of herbicides as vegetation control measures shall be used only when mechanical means have been deemed ineffective. All uses of such herbicidal compounds shall observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and state and federal legislation as well as additional project-related restrictions deemed necessary by the CDFW and/or USFWS. No rodenticides shall be used.									
9. Prior to the start of construction at any proposed facility site where special-status amphibians, reptiles and mammals have a moderate or high potential to occur, the construction work area boundary shall be fenced with a temporary exclusion fence to prevent special-status wildlife from entering the site during construction (see Table 4.6-6 for the list of special-status species that could be significantly impacted at each project facility site). The exclusion fencing shall be constructed of metal flashing, plastic sheeting, or other materials that will prohibit California horned lizards, Monterey shrews, and other special-status reptiles, amphibians, and rodents from climbing the fence. If meshing is used it shall be of a size that would not catch wildlife. The fencing shall be buried a minimum of 6 inches below grade to secure the fence and extend a minimum of 30 inches above grade. The fencing shall be inspected by the Lead Biologist or qualified biological monitor on a daily basis during construction activities to ensure fence integrity. Any needed repairs to the fence shall be performed on the day of their discovery. Fencing shall be installed and maintained during all phases of construction. Final fence design and location shall be determined in consultation with USFWS and CDFW. Exclusion fencing shall be removed once construction activities are complete.									
10. If special-status wildlife species are found on the site immediately prior to construction or during project construction, construction activities shall cease in the vicinity of the animal until the animal moves on its own (if possible, as determined by the Lead Biologist or biological monitor) outside of the project area. Additional mitigation measures specific to special-status plants; Smith's blue butterfly; black legless lizard; silver legless lizard, and coast horned lizard; western burrowing; American badger; Monterey dusky-footed woodrat, California red-legged frog and California tiger salamander are described in Mitigation Measure 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1k, and 4.6-1o. The Lead Biologist and Lead Agencies shall consult with wildlife resource agency(ies) with jurisdiction over the species regarding any additional avoidance, minimization, or mitigation measures that may be necessary if the animal does not move on its own. A report shall be prepared by the Lead Biologist to document the activities of the animal within the site; all fence construction, modification, and repair efforts; and movements of the animal once again outside the exclusion fence. This report shall be submitted to the CPUC and pertinent wildlife agencies with jurisdiction over the wildlife species.									

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>11. Vegetation removal and grading activities shall be conducted during daylight hours. Immediately prior to conducting vegetation removal or grading activities inside fenced exclusion areas, the Lead Biologist or a qualified biologist shall survey within the exclusion area to ensure that no special-status species are present. The Lead Biologist or a qualified biologist shall also monitor vegetation removal or grading activities inside fenced exclusion areas for the presence of special-status species. If special-status species are present, then measure 10 above shall be implemented.</p> <p>12. To prevent the inadvertent entrapment of special-status wildlife during construction, all excavated, steep-walled holes or trenches more than 2 feet deep shall be covered with plywood or similar materials at the close of each working day, or escape ramps constructed of earth fill or wooden planks shall be positioned within the excavations to allow special-status wildlife to escape on their own. Before such holes or trenches are filled, they shall be thoroughly inspected for trapped animals. If trapped animals are observed, escape ramps or structures shall be installed immediately to allow escape. If listed species are trapped, they shall only be relocated with authorization from USFWS and/or CDFW, as appropriate.</p> <p>13. All construction pipes, culverts, or similar structures that are stored at a construction site for one or more overnight periods and with a diameter of 4 inches or more shall be inspected for special-status wildlife before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status animal is discovered inside a pipe, that section of pipe shall not be moved until the appropriate resource agency, with jurisdiction over that species, has been consulted to determine the appropriate method for relocation. If necessary, under the direct supervision of the qualified biologist, the pipe may be moved once to remove it from the path of construction activity until the animal has escaped.</p> <p>14. All vertical tubes used in project construction, such as chain link fencing poles or signage mounts, shall be temporarily or permanently capped at the time they are installed to avoid the entrapment and death of special-status birds.</p> <p>15. Water used for dust abatement shall be minimized in an effort to avoid the formation of puddles that could attract common ravens and other predators to the construction work areas.</p> <p>16. No vehicle or equipment parked in the project area shall be moved prior to inspecting the ground beneath the vehicle or equipment for the presence of wildlife. If present, the animal shall be left to move on its own.</p> <p>17. All vehicles and equipment shall be in proper working condition to ensure that there is no potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Lead Biologist shall be informed of any hazardous spills within 24 hours of the incident. Hazardous spills shall be immediately cleaned up and the contaminated soil shall be properly disposed of at a licensed facility.</p> <p>18. A trash abatement program shall be implemented during construction. Trash and food items shall be contained in closed containers and removed from the construction site daily to reduce the attractiveness to opportunistic predators such as common ravens, coyotes, and feral dogs.</p> <p>19. Workers shall be prohibited from feeding wildlife and bringing pets and firearms to the construction work areas.</p> <p>20. Intentional killing or collection of wildlife species, including special-status species in the project area and surrounding areas shall be strictly prohibited.</p> <p>21. All temporarily disturbed areas shall be returned to pre-project conditions or better. Existing access roads within the CEMEX site shall be returned to their existing use.</p> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p>									

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1d: Protective Measures for Western Snowy Plover.</b> Construction contractors shall be required to implement the following measures to protect western snowy plover:</p> <ol style="list-style-type: none"> <li>CalAm shall require that its construction contractor(s) implement all avoidance and minimization measures required by USFWS as part of the FESA Section 7 consultation between the ONMS and USFWS.</li> <li>Construction work at the slant well heads and along the segment of the Source Water Pipeline located west of the CEMEX processing plant shall occur during the western snowy plover non-breeding season (defined as October 1 through February 28) unless otherwise approved by the USFWS.</li> <li>For work that cannot be completed during the non-nesting season, the following steps to obtaining USFWS approval shall be implemented:                     <ol style="list-style-type: none"> <li>CalAm shall include in final design submittals to the Lead Agencies and USFWS proposed feasible methods of avoidance and minimization of impacts on nesting western snowy plovers. Such measures may include, but are not limited to, installation of visual or noise barriers, limiting the type of construction, installation of noise controls on equipment, and other measures that achieve visual separation and/or noise reduction. CalAm shall obtain concurrence from Lead Agencies and USFWS on this proposed suite of avoidance and minimization measures prior to start of construction of the subsurface slant wells and Source Water Pipeline. Measures shall be implemented as necessary as described in item d, below.</li> <li>CalAm shall engage the services of Point Blue or other qualified western snowy plover biologist (subject to approval by USFWS) to perform one year of surveys during the nesting season preceding construction to determine whether nesting is occurring within sight or audible range of the slant well head locations or Source Water Pipeline.</li> <li>If findings from the nesting season survey are negative, then the qualified western snowy plover biologist shall conduct additional pre-construction nesting surveys within 24 hours of initiation of construction activities within 300 feet of all construction work areas to determine if any snowy plover nests are present. If there is a break of 3 days or more in construction activities, a survey shall be conducted before construction begins again.</li> <li>If nests are observed within 300 feet of construction activities, the qualified biologist shall notify and consult with USFWS to determine whether construction may proceed, based on detailed information on location of nest(s), proximity to construction, topography, and noise environment. Additional avoidance or minimization measures shall be implemented prior to initiating construction activities. Construction may proceed if, with the incorporation of such avoidance or minimization measures, the work would not cause an adult to abandon an active nest or young, change an adult's behavior so it could not care for an active nest or young, or directly impact an adult or young, or as allowed within the take provisions authorized by USFWS.</li> <li>The biologist shall conduct periodic monitoring during construction to determine if there are any nest starts. Nest starts shall be reported to USFWS to determine whether construction on all or portions of the slant wells or Source Water Pipeline need to be suspended for the duration of nesting and fledging. The biologist will inform the decision with detailed information on location of nest(s), proximity to construction, topography, and noise environment. Construction may continue, subject to USFWS approval, if, with the incorporation of avoidance or minimization measures identified under item a, above, and deemed necessary by USFWS, the work would not cause an adult to abandon an active nest or young, change an adult's behavior so it could not care for an active nest or young, or directly impact an adult or young, or as allowed within the take provisions authorized by USFWS.</li> </ol> </li> </ol>	X						<p>CalAm shall provide and obtain approval from CPUC and USFWS of final design submittals and provide a copy of all permits and approvals issued by USFWS as well as any subsequent modifications approved and related avoidance and minimization measures required by USFWS. The Lead Biologist hired by CalAm will oversee compliance with avoidance and minimization measures for Western Snowy Plover and their habitat and as directed in permit conditions approved and monitored by USFWS. Documentation of these measures, including species found on-site, will be sent to ONMS, CPUC, and USFWS for monitoring of effectiveness.</p> <p>Prior to and during construction activities and during maintenance activities at the slant well sites.</p> <p>Implementation of all avoidance and minimization measures required by USFWS for Western Snowy Plover, including those in this mitigation measure, prior to the start of construction, during construction, and during maintenance of the slant wells to ensure that impacts on Western Snowy Plovers and their nests are avoided or that all conditions of any take permits/authorizations are successfully implemented.</p>	

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>4. For construction during the breeding season that is approved by USFWS, visual barriers shall be installed around any work area located within line of sight of potential nesting habitat. Visual barriers shall be constructed at an adequate height and width to visually block construction equipment and construction crews from snowy plover nesting habitat. Final designs of the visual barriers shall be coordinated with USFWS. Existing sand dunes may serve as visual barriers.</p> <p>5. For work conducted during the non-nesting season, a qualified biologist will evaluate the nature and extent of wintering plover activity in the project area no more than 3 days prior to construction and inform CalAm so they can implement avoidance and minimization measures, such as those listed in subsection 3a, that avoid or minimize disturbance to plovers. The biologist shall conduct periodic monitoring during construction to ensure that minimization measures are implemented to avoid or minimize disturbance to plovers. The measures shall ensure that wintering plovers are not directly impacted by construction activities.</p> <p>6. CalAm shall restore all temporarily impacted potential snowy plover habitat following construction. At a minimum the restored site shall meet the following performance standards by the fifth year following restoration:</p> <ol style="list-style-type: none"> <li>Temporarily impacted areas are returned to pre-project conditions or greater</li> <li>Native vegetation cover shall be at least 70 percent of baseline native vegetation cover</li> <li>The restoration area shall have no more cover by invasives than the baseline</li> </ol> <p>Restoration and performance standards shall be described in a Habitat Mitigation and Monitoring Plan consistent with <b>Mitigation Measure 4.6-1n (Habitat Mitigation and Monitoring Plan)</b>.</p> <p>7. Anti-perching devices, such as bird spikes or wire strips, shall be installed and maintained on the top of the proposed electrical control cabinets to discourage potential plover predators.</p> <p>8. Permanent loss of western snowy plover habitat, to be determined based on final design and construction specifications, will be compensated at a minimum ratio of 3:1. Compensation may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat for western snowy plover.</p> <p>Prior to project implementation, CalAm shall prepare a Habitat Mitigation and Monitoring Plan, as described in Mitigation Measure 4.6-1n (Habitat Mitigation and Monitoring Plan), which will describe either onsite or offsite creation, restoration, enhancement, or preservation. The plan will include actions to benefit western snowy plover, in conjunction with providing mitigation for special-status plants, as described in Mitigation Measure 4.6-1e, below. The plan will be subject to USFWS input and approval. It will describe creation, restoration, and/or enhancement methods that may include, but not be limited to removal of ice plant, stabilization of dune sand, planting, seeding or other means of re-establishing native plant species. It will describe measures to manage recreational activities to benefit western snowy plover. Measures may include requiring that dogs are on leash, fencing is installed around breeding areas, and kite flying is restricted in the breeding season.</p> <p>CalAm will identify and secure access rights and other approvals to implement the plan, and will execute the plan. CalAm will conduct, or will support a qualified third party monitor to conduct annual monitoring of performance measures for a minimum of five years, such as cover, density and diversity of native plant species, thresholds of non-native plant abundance, and stability of dune sands. At a minimum, the compensation areas shall meet the following performance standards by the fifth monitoring year:</p> <ol style="list-style-type: none"> <li>Native vegetation cover shall be at least 70 percent of the native vegetation cover in the impact area.</li> <li>The compensation areas shall not be heavily vegetated.</li> <li>Invasive species cover shall be less than or equal to the invasive species cover in the impact area.</li> <li>No barrier between the compensation site and the water.</li> <li>No significant erosion.</li> </ol>									

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>This measure also applies to periodic maintenance of the subsurface slant wells, which would result in a permanent loss of western snowy plover habitat. Compensatory mitigation for permanent loss from periodic maintenance of the subsurface slant wells would only be applied once and would not be applied for each five-year maintenance event.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1e: Avoidance and Minimization Measures for Special-status Plants.</b></p> <p>Prior to construction, CalAm or its contractor shall conduct focused botanical survey(s) for special-status plants in all potentially suitable habitat during the appropriate blooming period for each species and in accordance with the guidelines established by California Department of Fish and Game in <i>Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities</i> (CDFG, 2009). Maps depicting the results of these surveys shall be prepared for use in final design. If more than two years elapse between the focused botanical surveys and commencement of ground disturbance activities, a final set of appropriately-timed focused botanical surveys shall be conducted and populations mapped. The results of these final surveys shall be combined with previous survey results to produce habitat maps showing habitat where the special-status plants have been observed during either of the focused botanical surveys conducted for each facility site.</p> <p>Special-status plant species are widespread throughout the project area, and could occur at the following facility locations: subsurface slant well site, MPWSP Desalination Plant site, ASR-5 and ASR-6 Wells sites, and along the Source Water Pipeline, new Desalinated Water Pipeline and new Desalinated Water Pipeline Optional Alignment, the Castroville Pipeline and Castroville Pipeline Optional Alignments, new Transmission Main and new Transmission Main Optional Alignment, ASR Conveyance Pipeline, ASR Pump-to-Waste Pipeline, and ASR Recirculation Pipeline, Ryan Ranch-Bishop Interconnection Improvements, and Main System-Hidden Hills Interconnection Improvements, and at proposed staging areas.</p> <ol style="list-style-type: none"> <li>To the extent feasible, project facilities shall be sited to avoid permanent and temporary impacts on special-status plants and their required constituent habitat elements.</li> <li>Special-status plants located within temporary construction areas shall be fenced or flagged for avoidance (if feasible) prior to construction. The Lead Biologist or the appointed biological monitor shall ensure compliance with off-limits areas. If avoidance is not feasible, seasonal avoidance measures (i.e., limited operating periods based on timing of annual plant dormancy), or temporarily placing heavy fabric or wooden mats over the affected habitat shall be applied as appropriate. Topsoil salvage and site restoration may also be implemented, to be determined by the Lead Biologist and USFWS and CDFW, as appropriate, to ensure the site is returned to pre-construction conditions.</li> <li>For potential impacts on listed plant species, such as Menzies' wallflower, sand gilia, Monterey spineflower, and Yadon's rain orchid, CalAm shall comply with the FESA CESA by implementing any requirements from USFWS and CDFW consultation. For state listed rare plants, a state Incidental Take Permit (ITP) may be required which would provide conditions for allowable take and measures to compensate impacts on rare plants.</li> <li>For HMP plant species on former Fort Ord lands, plants shall be salvaged, under the direction of a qualified biologist, as necessary, per the requirements of the HMP, and in accordance with any requirements from USFWS and CDFW.</li> <li>If avoidance is not feasible, compensation for temporary or permanent loss of special-status plant occurrences, in the form of land purchase or restoration, shall be provided at a minimum 1:1 ratio for temporary impacts and 2:1 ratio for permanent impacts. Compensation for loss of special-status plant populations may include the restoration or enhancement of temporarily impacted areas, purchase and permanent stewardship of known occupied habitat or the restoration and reintroduction of populations in degraded, unoccupied habitat. Restoration or reintroduction may</li> </ol>	X			X	X	X		<p>Prior to construction activities and subsequent maintenance activities at the slant well sites.</p> <p>CalAm shall provide and obtain approval from CPUC and USFWS/CDFW of final design submittals which incorporate the required botanical surveys and habitat maps and demonstrate either that facilities are sited to avoid impacts on special-status plants/habitat elements or that required restoration will be achieved by way of a Habitat Mitigation and Monitoring Plan or compensatory credits approved by all required resource and local agencies consistent with the requirements of this MM. A Lead Biologist hired by CalAm will oversee compliance with avoidance and minimization measures for special-status plant species and sensitive natural communities and as directed in permit conditions approved and monitored by USFWS and CDFW.</p> <p>Use of maps prepared with location of special-status plants in final design drawings and documented evidence that permanent and temporary impacts on special-status plants and their required constituent habitat elements are avoided. Compensation, by restoration or credits, shall be provided as approved by all required resource and local agencies when avoidance is not possible.</p>	

TABLE 1 (Continued)  
 CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Conveyance		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>be located on- or offsite. At a minimum, the compensation areas shall meet the following performance standards by the fifth year following initiation of compensation efforts:</p> <ol style="list-style-type: none"> <li>The compensation area shall be at least the same size as the impact area.</li> <li>Native vegetation cover shall be at least 70 percent of the native vegetation cover in the impact area</li> <li>Population of the impacted special-status species shall have either:                             <ol style="list-style-type: none"> <li>at least 60 percent cover of the impact area, or</li> <li>at least 70 percent survival of installed plants</li> </ol> </li> <li>Invasive species cover shall be less than or equal to the invasive species cover in the impact area</li> </ol> <p>Additionally, restored populations shall have greater than the number of individuals of the impacted population, in an area greater than or equal to the size of the impacted population, for at least 3 consecutive years without irrigation, weeding, or other manipulation of the restoration site.</p> <ol style="list-style-type: none"> <li>CalAm shall prepare a <b>Habitat Mitigation and Monitoring Plan, as described in Mitigation Measure 4.6-1n</b> (Habitat Mitigation and Monitoring Plan), which will describe either onsite or offsite restoration. Alternatively, compensatory credits may be purchased through a USFWS- and/or CDFW-approved mitigation bank, or USFWS-approved Habitat Conservation Plan.</li> </ol> <p>This measure also applies to periodic maintenance of the subsurface slant wells, which would result in a permanent loss of special-status plants occurring at that site. Compensatory mitigation for permanent loss from periodic maintenance of the subsurface slant wells would only be applied once and would not be applied for each five-year maintenance event.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly.</b></p> <p>CalAm or its construction contractor(s) shall implement the following measures to reduce impacts on Smith's blue butterfly during construction:</p> <ol style="list-style-type: none"> <li>CalAm shall require that its construction contractor(s) implement all avoidance and minimization measures required by USFWS as part of the FESA Section 7 consultation between ONMS and USFWS.</li> <li>Floristic botanical surveys of all suitable habitat for coast buckwheat and seedliff buckwheat, both of which are host plants to Smith's blue butterfly, shall be conducted by a qualified biologist during project design and prior to project implementation. Maps depicting the results of these surveys shall be prepared to document the location of the host plants within or adjacent to the project area.</li> <li>Construction of project elements shall be planned to avoid mapped host plants for Smith's blue butterfly whenever feasible.</li> <li>If it is not feasible to avoid disturbance to host plants during project construction, the following shall be implemented:                             <ol style="list-style-type: none"> <li>Prior to the start of construction activities and before conducting preconstruction surveys for Smith's blue butterfly, the Lead Biologist or an appointed qualified biologist shall prepare a protect-in-place and relocation plan for Smith's blue butterfly and its host plants. If either is found in areas subject to permanent habitat or plant loss, then plants would be salvaged and relocated in accordance with the plan. The relocation plan shall be submitted to USFWS for approval. The relocation plan shall define the study area, describe appropriate handling and relocation methods (such as digging up and removing individual plants, duff, and/or soil and</li> </ol> </li> </ol>	X			X	X	X	X	<p>Prior to and during construction activities and during maintenance activities at the slant well sites.</p> <p>CalAm shall obtain approval from USFWS/ONMS, and shall provide copies thereof to CPUC, along with final design submittals and a protect in place and relocation plan which incorporates the required botanical surveys and habitat maps and demonstrate either that facilities are sited to avoid impacts on Smith's blue butterfly and its host plants or that required restoration will be achieved by way of a Habitat Mitigation and Monitoring Plan or compensatory credits approved by all required resource and local agencies consistent with the requirements of this MM. A Lead Biologist hired by CalAm will oversee compliance with avoidance and minimization measures for Smith's blue butterfly and sensitive natural communities and as directed in permit conditions approved and monitored by USFWS and CDFW. Documentation of these measures, including species found on-site, will be sent to CPUC, USFWS, and CDFW for monitoring of effectiveness and for compensatory mitigation.</p>	<p>Use of maps prepared with location of Smith's blue butterfly and its habitat in final design drawings and documented evidence that permanent and temporary impacts on special-status plants and their required constituent habitat elements are avoided. Compensation, by restoration or credits, shall be provided as approved by all required resource and local agencies when avoidance is not possible.</p>

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: Cal/Am Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>moving them to a new location), and identify appropriate relocation sites. Surveys shall be conducted at relocation sites to determine the existing Smith's blue butterfly population size and ensure that the relocation sites will not become overpopulated. Only relocation sites that are not overpopulated and have suitable habitat conditions (e.g. soils, vegetation, etc.) shall be used.</p> <p>b. If preconstruction surveys identify butterflies or host plants in areas subject only to temporary disturbance that do not require plant removal, then the plants, and leaf litter and soil which may hold dormant butterfly pupae, would be protected in place with heavy fabric, plywood or other mats (depending on the stability of the underlying soil) to allow construction vehicles to pass over. Following construction, the fabric or mats would be carefully removed and the area allowed to recover. Short-term damage to buckwheat populations is expected to be low.</p> <p>c. A qualified biologist shall survey the work area no more than 30 days before the onset of ground disturbance. If any life stage of the Smith's blue butterfly or its host plants is found within the project area boundary, the Lead Biologist or qualified biologist shall relocate plants, duff, and/or soil, from the site before construction begins per the relocation plan described above.</p> <p>5. Upon completion of construction activities, Cal/Am shall restore Smith's blue butterfly habitat temporarily impacted during construction. Compensatory mitigation for permanent impacts shall be provided either onsite or offsite at a minimum ratio of 2:1. Compensation for loss of host plant populations may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat. At a minimum the restoration or compensation sites shall meet the following performance standards by the fifth year following restoration:</p> <ol style="list-style-type: none"> <li>Temporarily impacted areas are returned to pre-project conditions or greater</li> <li>Native vegetation cover shall be at least 70 percent of baseline/impact area native vegetation cover</li> <li>The population of coast buckwheat and/or seaciff buckwheat shall have either: <ol style="list-style-type: none"> <li>at least 60 percent cover of the baseline/impact area, or</li> <li>at least 70 percent survival of installed plants</li> </ol> </li> <li>No more cover by invasives than the baseline/impact area</li> </ol> <p><b>Mitigation Measure 4.6-1n (Habitat Mitigation and Monitoring Plan).</b> Alternatively, compensatory credits may be purchased through an approved mitigation bank, or approved Habitat Conservation Plan.</p> <p>This measure also applies to periodic maintenance of the subsurface silt wells, which would result in a permanent loss of Smith's blue butterfly habitat. Compensatory mitigation for permanent loss from periodic maintenance of the subsurface silt wells would only be applied once and would not be applied for each five-year maintenance event.</p>									

TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1g: Avoidance and Minimization Measures for Black Legless Lizard, Silvery Legless Lizard, and Coast Horned Lizard.</b></p> <p>The Lead Biologist shall appoint a qualified biologist possessing a Scientific Collecting Permit issued by CDFW for black legless lizard, silvery legless lizard, and coast horned lizard to conduct preconstruction surveys for legless lizards and coast horned lizards within 24 hours prior to the initiation of ground disturbing activities or vegetation clearing in suitable habitats such as central dune scrub, coast sage scrub, and central maritime chaparral.</p> <p>1. Prior to conducting the surveys, the qualified biologist shall prepare a relocation plan that describes the appropriate survey and handling methods for the lizards, and identifies nearby relocation sites where the lizards would be relocated if found during the preconstruction surveys. Surveys shall be conducted at relocation sites to determine the existing lizard population size and ensure that the relocation sites will not become overpopulated. Only relocation sites that are not overpopulated and have suitable habitat conditions (e.g., soils, moisture content, vegetation, aspect) shall be used. The relocation plan shall be submitted to CDFW for approval prior to the start of construction activities.</p> <p>2. Legless lizard surveys shall be conducted by hand raking soil and leaf litter beneath brush. If Legless lizards are encountered, they shall be salvaged and relocated per the relocation plan.</p> <p>3. Coast horned lizard surveys shall be conducted by walking transects spaced appropriately to allow for 100 percent visual coverage in search of lizards under shrubs, along gravelly-sandy areas, or any other suitable habitat. Any lizard encountered shall be relocated per the relocation plan.</p> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1h: Avoidance and Minimization Measures for Western Burrowing Owl.</b></p> <p>The following measures shall be implemented to avoid and minimize impact on western burrowing owl:</p> <ol style="list-style-type: none"> <li>Prior to the start of construction activities in or around suitable burrowing owl habitat, the Lead Biologist shall appoint a qualified biologist to conduct protocol surveys for burrowing owl. The survey methodology shall be consistent with the methods outlined in the Staff Report on Burrowing Owl Mitigation (CDFG, 2012). The surveys shall consist of walking parallel transects spaced 7 to 20 meters (23 to 65 feet) apart, adjusting for vegetation height and density as needed, and noting any potential burrows with fresh burrowing owl sign or presence of burrowing owls. A copy of the protocol survey results shall be submitted to the CPUC and CDFW upon request. Protocol surveys shall be conducted within both the breeding and non-breeding seasons to determine the presence/absence of burrowing owls.</li> <li>A qualified biologist shall conduct preconstruction surveys of the permanent and temporary impact areas in or around suitable burrowing owl habitat to locate active breeding or wintering burrowing owl burrows less than 14 days prior to construction and/or prior to exclusion fencing installation. The methodology for the preconstruction surveys shall be consistent with the methods outlined in the Staff Report on Burrowing Owl Mitigation.</li> <li>If no burrowing owls are detected, no additional action is necessary.</li> <li>In areas positive for burrowing owl presence, the Lead Biologist or qualified biological monitor shall be onsite during all construction activities in areas where burrowing owls are determined to be present.</li> </ol>	X		X	X	X	X	X	X	<p>Prior to construction activities and subsequent maintenance activities at the slant well sites.</p> <p>CalAm shall provide the CPUC with the name of the biologist to conduct preconstruction lizard surveys, a copy of his/her valid Scientific Collecting Permit and the CDFW-approved relocation plan. A Lead Biologist hired by CalAm will oversee compliance with avoidance and minimization measures for black legless lizard, silvery legless lizard, and coast horned lizard and as directed in conditions approved and monitored by CDFW. Documentation of these measures, including species found on-site and collected, will be sent to CPUC and CDFW for monitoring of effectiveness and for compensatory mitigation.</p> <p>Prior to and during construction activities and during subsequent maintenance activities at the slant well sites.</p> <p>CalAm shall provide the CPUC with the name of the biologist(s) to conduct protocol and preconstruction owl surveys, copies of all survey results and copies of all CDFW-approved owl buffers and related plans (e.g., Burrowing Owl Exclusion Plan, Burrowing Owl Habitat Mitigation Plan, and any other related buffer coordination/authorizations).</p> <p>Protocol and preconstruction surveys demonstrate absence of burrowing owls or if present that all applicable CDFW-approved buffers, Exclusion and Mitigation Plans are fully implemented and/or compensatory mitigation provided.</p>



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>5. If burrowing owls are detected during the nesting and fledging seasons (April 1 to August 15 and August 16 to October 15, respectively), no ground-disturbing activities shall be permitted within the distances specified in <b>Table 4.6-8</b> from an active burrow, unless otherwise authorized by CDFW. The specified buffer distance ranges from 656 feet to 1,640 feet, according to the time of year and the level of disturbance. Buffers shall be established in accordance with <b>Table 4.6-8</b> and occupied burrows shall not be disturbed during the nesting season unless a qualified biologist approved by CDFW verifies through noninvasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. Burrowing owls shall not be moved or excluded from burrows during the breeding season (April 1 to October 15). The buffer distance can be reduced with authorization from CDFW if construction activities would not cause an adult to abandon an active nest or young or change an adult's behavior so it could not care for an active nest or young.</p> <p>6. During the non-breeding (winter) season (October 16 to March 31), consistent with <b>Table 4.6-8</b>, ground-disturbing work shall maintain a distance ranging from 164 to 1,640 feet from any active burrows, depending on the level of disturbance, to be determined through coordination with CDFW. The buffer distance can be reduced with authorization from CDFW if construction activities would not cause the owl to abandon its winter burrow. If active winter burrows are found that would be directly affected by ground-disturbing activities, owls can be displaced from winter burrows according to recommendations made in the <i>Staff Report on Burrowing Owl Mitigation</i>.</p>									

**TABLE 4.6-8  
BURROWING OWL BURROW BUFFERS**

Location	Time of Year	Level of Disturbance		
		Low	Medium	High
Nesting sites	April 1–August 15	656 feet	1,640 feet	1,640 feet
Nesting sites	August 16–October 15	656 feet	656 feet	1,640 feet
Any occupied burrow	October 16–March 31	164 feet	328 feet	1,640 feet

SOURCE: CDFG, 2012.

7. Burrowing owls shall not be excluded from burrows unless or until a Burrowing Owl Exclusion Plan is developed by the Lead Biologist, approved by CDFW, and submitted to the CPUC. At a minimum, the plan shall include the following:
- Confirmation by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding the use of a scope to visually inspect the burrow;
  - Specifications regarding the type of scope to be used and the appropriate timing of using a scope to visually inspect burrows to avoid disturbance of individual owls;
  - Occupancy factors to look for and what shall guide determination of vacancy and excavation timing;
  - Methods for burrow excavation. Excavation using hand tools with refilling to prevent reoccupation is preferable;
  - Removal of other potential owl burrow surrogates or refugia onsite;
  - Photographing the excavation and closure of the burrow to demonstrate success and sufficiency.

TABLE 1 (Continued)  
 CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria	
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule			
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>g. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use and to avoid take;</p> <p>h. Methods to ensure the impacted site shall continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy diskimg, or immediate and continuous grading) until development is complete.</p> <p>8. Site monitoring shall be conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Prior to exclusion activities, daily monitoring shall be conducted for one week to confirm young owls have fledged if the exclusion occurs immediately after the end of the breeding season.</p> <p>9. If burrowing owls are found on-site, compensatory mitigation for loss of breeding and/or wintering habitat shall be implemented onsite or offsite in accordance with burrowing owl <i>Staff Report on Burrowing Owl Mitigation</i> guidance and in consultation with CDFW. If compensatory mitigation is necessary, CalAm shall detail the compensatory mitigation in a Burrowing Owl Habitat Mitigation Plan (which shall be incorporated into the Habitat Mitigation and Monitoring Plan described in <b>Mitigation Measure 4.6-1n</b>). At a minimum, the following measures shall be implemented:</p> <p>a. Temporarily disturbed habitat shall be restored to pre-construction conditions, including soil decompaction and revegetation.</p> <p>b. Permanent impacts on nesting, occupied and satellite burrows, and any other burrowing owl habitat shall be mitigated such that the habitat acreage, number of burrows, and number of burrowing owls impacted are replaced. Compensatory mitigation may include the permanent conservation of lands with similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) as those lands where the permanent loss of habitat would occur. Conservation lands shall provide habitat for burrowing owl nesting, foraging, wintering, and/or dispersal (i.e., during breeding and nonbreeding seasons) comparable to or better than that of the impact area, and with sufficiently large acreage, and presence of fossorial mammals.</p> <p>Alternatively, compensatory credits may be purchased through an approved mitigation bank, or approved Habitat Conservation Plan.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1i: Avoidance and Minimization Measures for Nesting Birds.</b></p> <p>This measure applies to all nesting birds protected by the federal Migratory Bird Treaty Act and Section 3503 of the California Fish and Game Code, except for western snowy plover and western burrowing owl, which are addressed in Mitigation Measure 4.6-1d and 4.6-1h, respectively.</p> <p>Nesting birds may be present at all of the proposed facility sites. A qualified biologist shall conduct preconstruction avian nesting surveys prior to initiation of construction activities at all facility sites, unless otherwise indicated below.</p> <ol style="list-style-type: none"> <li>No preconstruction surveys or avoidance measures are required for construction activities that would be completed entirely during the non-nesting season (September 16 to January 31).</li> <li>For all construction activities scheduled to occur during the nesting season (February 1 to September 15), the qualified biologist shall conduct a preconstruction avian nesting survey no more than 10 days prior to the start of staging, site clearing, and/or ground disturbance. Copies of the survey results shall be submitted to the CPUC.</li> <li>If construction activities at any given facility site begins in the non-breeding season and proceeds continuously into the breeding season, no surveys are required as long as a similar type of construction continues.</li> <li>If there is a break of 10 days or more in construction activities during the breeding season, a new nesting bird survey shall be conducted before reinitiating construction.</li> </ol>	X			X	X	X	X				
									CalAm shall provide to the CPUC the name of the biologist(s) to conduct required preconstruction nesting surveys and construction monitoring, copies of all surveys and monitoring reports prepared by the biologist(s) and copies of all related CDFW buffer and mitigation consultations, approvals and/or authorizations.	Prior to and during construction activities and during subsequent maintenance activities at the slant well sites.	Preconstruction surveys demonstrate absence of active nests or if present that all applicable CDFW-approved buffers and avoidance/minimization measures are fully implemented.

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
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<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>5. The surveying biologist shall be capable of determining the species and nesting stage without causing intrusive disturbance. The surveys shall cover all potential nesting sites within 500 feet of the project area for raptors and within 300 feet for other birds.</p> <p>If active nests are found in the project area or vicinity (500 feet for raptors and 300 feet for other birds), the nests shall be continuously surveyed for the first 24 hours prior to any construction related activities to establish a behavioral baseline and, once work commences, all nests shall be continuously monitored to detect any behavioral changes as a result of the project, if feasible. If behavioral changes are observed, work causing the change shall cease and CDFW shall be consulted for additional avoidance and minimization measures. The avoidance and minimization measures shall ensure that the construction activities do not cause the adult to abandon an active nest or young or change an adult's behavior so it could not care for an active nest or young.</p> <p>If continuous monitoring is not feasible, a no-disturbance buffer (at least 500 feet for raptors and 250 feet for other birds for as otherwise determined in consultation with CDFW and USFWS) shall be created around the active nests). The buffer distance can be reduced with authorization from CDFW if construction activities would not cause an adult to abandon an active nest or young or change an adult's behavior so it could not care for an active nest or young. If the nest(s) are found in an area where ground disturbance is scheduled to occur, the project operator shall require that ground disturbance be delayed until after the birds have fledged.</p> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1j: Avoidance and Minimization Measures for American Badger.</b></p> <p>The following measures shall be implemented to avoid and minimize impacts on American badger:</p> <ol style="list-style-type: none"> <li>1. A qualified biologist shall conduct preconstruction surveys for American badger dens prior to the start of construction at potentially affected sites. The survey results shall be submitted to the CPUC.</li> <li>2. Areas of suitable habitat for American badger in the project area include fallow agricultural and grazing land and non-native grasslands. Surveys shall be conducted wherever these vegetation communities exist within 100 feet of the project area boundary. Along pipeline alignments surveys shall be phased to occur within 14 days prior to disturbance along that portion of the alignment. Game cameras shall be used to record any movements at potentially active dens for no less than three (3) nights.</li> <li>3. Areas of suitable habitat for American badger in the project area include fallow agricultural and grazing land and non-native grasslands. Surveys shall be conducted wherever these vegetation communities exist within 100 feet of the project area boundary. Along pipeline alignments surveys shall be phased to occur within 14 days prior to disturbance along that portion of the alignment.</li> <li>4. If no potential American badger dens are found during the preconstruction surveys, no further action is required.</li> <li>5. If the biologist determines that any potential dens identified during the preconstruction surveys are inactive, the biologist shall excavate the dens by hand with a shovel to prevent use by badgers during construction.</li> <li>6. If active badger dens are found during the course of preconstruction surveys, the following measures shall be taken to avoid and minimize adverse effects on American badger:             <ol style="list-style-type: none"> <li>a. Relocation shall be prohibited during the badger pupping season (typically February 15 to June 1).</li> <li>b. Construction activities shall not occur within 50 feet of active badger dens observed outside of the project area.</li> <li>c. The Lead Biologist shall contact CDFW immediately if natal badger dens are detected. Construction activities shall not occur within 200 feet of an active natal badger den. This buffer may be reduced, if approved by CDFW, and if construction would not alter the behavior of the adult or young in a way that would cause injury or death to those individuals.</li> </ol> </li> </ol>	X	X	X	X	X	X	<p>CalAm shall provide the name and qualifications of the biologist(s) to conduct required preconstruction badger surveys to the CPUC for approval. CalAm shall also provide to the CPUC construction monitoring reports, copies of all surveys prepared by the biologist(s), copies of all related CDFW-approved buffers, den excavations and/or badger relocation and documentary evidence of compliance therewith.</p>	<p>Prior to and during construction activities.</p> <p>Preconstruction surveys demonstrate absence of badgers and active dens or if present that all applicable CDFW-approved buffers, den excavations and/or badger relocations are fully implemented.</p>

**TABLE 1 (Continued)  
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<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>If the biologist determines that potential dens within the project area, and outside the breeding season, may be active, the biologist shall notify the CDFW. Badgers shall be passively relocated from active dens during the nonbreeding season. Passive relocation may include incrementally blocking the den entrance with soil, sticks, and debris for three to five days to discourage use of these dens prior to project disturbance. After the qualified biologist determines that badgers have abandoned any active dens found within the project area, the dens shall be hand-excavated with a shovel to prevent re-use during construction.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1k: Avoidance and Minimization Measures for Monterey Dusky-Footed Woodrat.</b></p> <p>The following measures shall be implemented to avoid and minimize impacts on Monterey dusky-footed woodrat:</p> <ol style="list-style-type: none"> <li>1. A qualified wildlife biologist shall conduct preconstruction surveys for Monterey dusky-footed woodrat. The surveys shall be conducted within 14 days prior to the start of construction in suitable habitat and shall identify any woodrat nests located within 50 feet of anticipated construction disturbance areas.</li> <li>2. If woodrat nests are found during the preconstruction surveys, the wildlife biologist shall conduct additional surveys throughout the duration of construction activities at the potentially affected facility site to identify any newly constructed woodrat nests.</li> <li>3. If nests are observed outside of the construction area, the qualified biologist shall demarcate a minimum 50-foot buffer area with orange construction fencing and require that all construction activities and disturbance remain outside of the fencing.</li> <li>4. Active woodrat nests located within the anticipated construction disturbance areas shall be relocated. Nests shall be relocated outside of the peak breeding season. (peak breeding season is typically February through November) to minimize disturbance to young woodrats. Relocation of woodrats and/or their nests shall be conducted by the Lead Biologist or qualified wildlife biologist as follows: <ol style="list-style-type: none"> <li>a. Clear understory vegetation from around the nest using hand tools.</li> <li>b. After all vegetative cover has been cleared around the nest, the biologist shall gently disturb the nest to encourage the woodrat(s) to abandon the nest and seek cover in adjacent habitat.</li> <li>c. Once the woodrats have left the nest, the biologist shall carefully relocate the nest sticks to suitable habitat outside of the construction disturbance area, piling the sticks at the base of trees or large shrubs if available. If multiple nests are relocated, the stick piles shall be placed at least 25 feet from one another.</li> <li>d. The Lead Biologist shall ensure potential health hazards to the biologists moving nests are addressed to minimize the risk of contracting diseases associated with woodrats and woodrat nests. These include hantavirus, Lyme disease, and plague. The biologists that relocate nests shall take the following precautionary safety measures: <ol style="list-style-type: none"> <li>i. Wear a Cal/OSHA-certified facial respirator to reduce inhalation of potential disease causing organisms.</li> <li>ii. Wear a white Tyvek protective suit to provide a barrier for ticks and fleas and facilitate their detection and removal and use gloves.</li> </ol> </li> <li>e. If young are encountered during dismantling of the nest, nest material shall be replaced and a 50-foot no-disturbance buffer shall be established around the active nest. The buffer shall remain in place until young have matured enough to disperse on their own accord and the nest is no longer active. Nesting substrate shall then be collected and relocated to suitable oak woodland habitat outside of the project area.</li> </ol> </li> </ol>	X			X	X	X		<p>CalAm shall provide the name and qualifications of the biologist(s) to conduct required preconstruction dusky-footed woodrat surveys to the CPUC for approval. CalAm shall also provide to the CPUC construction monitoring reports, copies of all surveys prepared by the biologist(s) and copies of all related CDFW-approved buffers, active nest relocations and documentary evidence of compliance therewith.</p> <p>Prior to and during construction.</p> <p>Surveys demonstrate absence of dusky-footed woodrats and active nests or if present that all applicable CDFW-approved buffers, nest relocations and related biologist safety measures are fully implemented.</p>	

**TABLE 1 (Continued)  
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<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1i: Avoidance and Minimization Measures for Special-status Bats.</b></p> <p>A qualified biologist who is experienced with bat surveying techniques (including auditory sampling methods), behavior, roosting habitat, and identification of local bat species shall be consulted prior to initiation of construction activities to conduct a preconstruction habitat assessment to characterize potential bat habitat and identify active roost sites. The preconstruction habitat assessment shall be conducted within 100 feet of construction activities.</p> <p>Should potential roosting habitat or potentially active bat roosts be identified during the habitat assessment in trees and/or structures to be disturbed under the project, the following measures shall be implemented:</p> <ol style="list-style-type: none"> <li>1. Removal or disturbance of trees or structures identified as potential bat roosting habitat or active roosts shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15, to the extent feasible. These dates avoid bat maternity roosting season (approximately April 15 – August 31) and periods of winter torpor (approximately October 15 – February 28).</li> <li>2. If removal or disturbance of trees and structures identified as potential bat roosting habitat or active roosts during the periods when bats are active is not feasible, a qualified biologist will conduct pre-construction surveys within 14 days prior to disturbance to further evaluate bat activity within the potential habitat or roost site.             <ol style="list-style-type: none"> <li>a. If active bat roosts are not identified in potential habitat during preconstruction surveys, no further action is required prior to removal of- or disturbance to trees and structures within the preconstruction survey area.</li> <li>b. If active bat roosts or evidence of roosting is identified during pre-construction surveys, the qualified biologist shall determine, if possible, the type of roost and species.                 <ol style="list-style-type: none"> <li>i. If special-status bat species or maternity or hibernation roosts are detected during these surveys, appropriate species- and roost-specific avoidance and protection measures shall be developed by the qualified biologist in coordination with CDFW. Such measures may include postponing the removal of structures or trees, or establishing exclusionary work buffers while the roost is active. A minimum 100-foot no disturbance buffer shall be established around special-status species, maternity, or hibernation roosts until the qualified biologist determines they are no longer active. The size of the no-disturbance buffer may be adjusted by the qualified biologist, in coordination with CDFW, depending on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site, and if construction would not alter the behavior of the adult or young in a way that would cause injury or death to those individuals.</li> <li>ii. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist. If a non-maternity or hibernation roost (e.g., bachelor daytime roost) is identified, disturbance to- or removal of trees or structures may occur under the supervision of a qualified biologist as described under 3).</li> </ol> </li> </ol> </li> <li>3. The qualified biologist shall be present during tree and structure disturbance or removal if active non-maternity or hibernation roosts or potential roosting habitat are present. Trees and structures with active non-maternity or hibernation roosts or potential habitat shall be disturbed or removed only under clear weather conditions when precipitation is not forecast for three days and when nighttime temperatures are at least 50°F, and when wind speeds are less than 15 mph.             <ol style="list-style-type: none"> <li>a. Trimming or removal of trees with active (non-maternity or hibernation) or potentially active roost sites shall follow a two-step removal process.</li> </ol> </li> </ol>	X		X	X	X	X	<p>CalAm shall provide the name and qualifications of the biologist(s) to conduct required preconstruction bat habitat assessment and surveys to the CPUC for approval. CalAm shall also provide to the CPUC copies of all assessments/surveys and construction monitoring prepared by the biologist(s) and copies of all related CDFW-approved buffers, avoidance and protection measures and documentary evidence of compliance therewith.</p>	<p>Prior to and during construction activities and during maintenance activities at the slant well sites.</p>	<p>Surveys demonstrate absence of bat habitat and active roost sites or, if present that all applicable CDFW-approved buffers and avoidance and protection measures are fully implemented.</p>

TABLE 1 (Continued)  
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<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>i. On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using hand tools (e.g., chainsaws).</p> <p>ii. On the following day and under the supervision of the qualified biologist, the remainder of the tree may be removed, either using hand tools or other equipment (e.g. excavator or backhoe).</p> <p>iii. All felled trees shall remain on the ground for at least 24 hours prior to chipping, off-site removal, or other processing to allow any bats to escape, or be inspected once felled by the qualified biologist to ensure no bats remain within the tree and/or branches.</p> <p>b. Disturbance to or removal of structures containing or suspected to contain active bat (non-maternity or hibernation) or potentially active bat roosts shall be done in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. Removal will be completed the subsequent day.</p> <p>4. Bat roosts that begin during construction are presumed to be unaffected as long as a similar type of construction continues, and no buffer would be necessary. Direct impacts on bat roosts or take of individual bats will be avoided.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine.</b></p> <p>A qualified botanist or arborist shall conduct surveys for native stands of Monterey pine prior to completion of final project design documents. Individual Monterey pine trees existing within the construction work area shall be evaluated to determine if they are native occurrences, relics, or otherwise naturally-occurring remnants of the past historic range. Maps depicting the results of these surveys shall be prepared for consideration during final facility design. Native stands of Monterey pine could occur at the identified facility sites and pipeline alignments based on the historical extent of native Monterey pines and biological reconnaissance surveys.</p> <p>To the extent feasible, project facilities shall be sited and construction activities planned to avoid impacts on native stands of Monterey pine. Any native stands of Monterey pines located within the anticipated construction disturbance area shall be fenced or flagged for avoidance prior to construction, and a biological monitor shall be present to ensure compliance with off-limits areas.</p> <p>If removal of native stands of Monterey pine cannot be avoided, trees shall be replaced at a 2:1 ratio for trees removed or directly impacted by construction activities. Only local Monterey pine genetic stock shall be used for replanting at the project site. Replacement plantings shall be planted contiguous with other individuals of the same species in areas that are determined to have suitable site conditions. Protective fencing shall be installed around the seedlings to protect against disturbance. Replacement trees shall be maintained and monitored for a period of five years and have a minimum of 70 percent survival in the fifth monitoring year to ensure success. The Habitat Mitigation and Monitoring Plan to be prepared in accordance with <b>Mitigation Measure 4.6-1n (Habitat Mitigation and Monitoring Plan)</b> shall detail the monitoring requirements and success criteria.</p> <p>This mitigation measures applies to native stands of Monterey pines. Independent of whether Monterey pines in the project area are considered native stands, individual trees may be subject to local tree ordinances; see <b>Mitigation Measure 4.6-5 (Compliance with Local Tree Policies and Ordinances)</b>.</p>	X			X	X	X	X	<p>CalAm shall provide the name and qualifications of the botanist(s) to conduct preconstruction surveys to the CPUC for approval. CalAm shall also provide to the CPUC copies of all assessments/surveys and construction monitoring prepared by the botanist(s) and copies of avoidance and protection measures and documentary evidence of compliance therewith. CalAm shall also provide and obtain approval from CPUC and all other required regulatory and local agencies of final design submittals which incorporate the required surveys and demonstrate either that facilities are sited to avoid impacts on native stands of Monterey pine or that required replacement will be achieved by way of a Habitat Mitigation and Monitoring Plan approved by all required resource and local agencies consistent with the requirements of this mitigation measure.</p>	<p>Prior to construction activities and subsequent maintenance activities at the slant well sites.</p> <p>Surveys and final design plans demonstrate avoidance of all native stands of Monterey pine or compensatory mitigation by replanting at a 2:1 replacement ratio and monitoring of success to ensure a minimum of 70 percent survival in the fifth monitoring year if avoidance is not possible.</p>

**TABLE 1 (Continued)  
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<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1n: Habitat Mitigation and Monitoring Plan.</b></p> <p>CalAm shall develop and submit a Habitat Mitigation and Monitoring Plan (HMMP) to the appropriate resource agencies (CCC, CDFW, CORWQCB, USACE, USFWS, and local agencies that require a habitat mitigation and monitoring plan) for approval prior to project construction. The HMMP will be a comprehensive document that will describe all of restoration and compensatory mitigation requirements, including the required performance standards identified in <b>Mitigation Measure 4.6-1d: Protective Measures for Western Snowy Plover, Mitigation Measure 4.6-1e: Avoidance and Minimization Measures for Special-status Plants, Mitigation Measure 4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly, Mitigation Measure 4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine, Mitigation Measure 4.6-1n: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander and Mitigation Measure 4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities and Environmentally Sensitive Habitat Areas.</b> The HMMP shall be implemented at all areas where special-status species habitat or sensitive natural communities will be restored, created, or enhanced to mitigate for project impacts either prior to, concurrently with, or following project construction, as specified in the HMMP. The HMMP shall outline measures to be implemented to, depending on the mitigation requirements, restore, improve, or re-establish special-status species habitat, sensitive natural communities, and critical habitat on the site, and shall include the following elements:</p> <ol style="list-style-type: none"> <li>1. Name and contact information for the property owner of the land on which the mitigation will take place</li> <li>2. Identification of the water source for supplemental irrigation</li> <li>3. Identification of depth to groundwater</li> <li>4. Site preparation guidelines to prepare for planting, including coarse and fine grading</li> <li>5. Plant material procurement, including assessment of risk of introduction of plant pathogens through use of nursery-grown container stock vs. collection and propagation of site-specific plant materials, or use of seeds</li> <li>6. Planting plan outlining species selection, planting locations and spacing, for each vegetation type to be restored</li> <li>7. Planting methods, including containers, hydroseed or hydromulch, weed barriers and cages, as needed</li> <li>8. Soil amendment recommendations</li> <li>9. Irrigation plan, with proposed rates (in gallons per minute), schedule (i.e. recurrence interval), and seasonal guidelines for watering</li> <li>10. Site protection plan to prevent unauthorized access, accidental damage and vandalism</li> <li>11. Weeding and other vegetation maintenance tasks and schedule, with specific thresholds for acceptance of invasive species</li> <li>12. Performance standards by which successful completion of mitigation can be assessed in comparison to a relevant baseline or reference site, and by which remedial actions will be triggered; success criteria shall include the minimum performance standards described in <b>Mitigation Measure 4.6-1d: Protective Measures for Western Snowy Plover, Mitigation Measure 4.6-1e: Avoidance and Minimization Measures for Special-status Plants, Mitigation Measure 4.6-1f: Avoidance and Minimization Measures for Smith's Blue Butterfly, Mitigation Measure 4.6-1h: Avoidance and Minimization Measures for Western Burrowing Owl, Mitigation Measure 4.6-1m: Avoidance and Minimization Measures for Native Stands of Monterey Pine, Mitigation Measure 4.6-1n: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander and Mitigation Measure 4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities and Environmentally Sensitive Habitat Areas.</b></li> </ol>	X		X	X	X	X	CalAm shall provide the CPUC with the required HMMP and all approvals thereof issued by the resource and local agencies.	Prior to construction.	Approved HMMP fully implemented and all compensatory mitigation achieved.

TABLE 1 (Continued)  
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Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>13. Monitoring methods and schedule</p> <p>14. Reporting requirements and schedule</p> <p>15. Adaptive management and corrective actions to achieve the established success criteria</p> <p>16. Educational outreach program to inform operations and maintenance departments of local land management and utility agencies of the mitigation purpose of restored areas to prevent accidental damages</p> <p>17. Description of any other compensatory mitigation in the form of land purchase, establishment of conservation easements or deed restrictions, contribution of funds in lieu of active restoration, or purchase of mitigation bank credits, or other means by which the mitigation site will be preserved in perpetuity.</p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1a: Avoidance and Minimization Measures for California Red-legged Frog and California Tiger Salamander.</b></p> <p>A preconstruction survey for California red-legged frog and California tiger salamander, shall be conducted by a qualified biologist in suitable habitat where there is a moderate to high potential for these species to occur prior to vegetation removal or grading, as specified below.</p> <ol style="list-style-type: none"> <li>Prior to conducting the surveys, the qualified biologist shall prepare a relocation plan that describes the appropriate survey and handling methods for California red-legged frog and California tiger salamander, and identifies nearby relocation sites where individuals would be relocated if found during the preconstruction surveys. The relocation plan shall be submitted to USFWS and CDFW for approval prior to the start of construction activities. The animal shall be relocated to a similar type of habitat or better from where it was relocated and shall only be relocated with authorization from USFWS and CDFW, as appropriate.</li> <li>Preconstruction surveys shall be conducted within 5 days prior to, and immediately prior to, vegetation removal, grading, or installation of exclusion fence to identify any California red-legged frog, California tiger salamander, and any small mammal burrows.</li> <li>Small mammal burrows identified during preconstruction surveys shall be surveyed (through hand-excavation, scoping, or other suitable methods to be determined in consultation with USFWS and CDFW) to identify any California red-legged frog or California tiger salamander. Once the burrow is confirmed to be vacant, the burrow shall be collapsed.</li> <li>If California red-legged frog or California tiger salamander are observed within the construction area, a qualified biologist shall relocate the individual according to the relocation plan above and only with authorization from USFWS and CDFW, as appropriate.</li> <li>Exclusion fencing shall be installed around construction areas where there is a moderate to high potential for these species to occur as specified in <b>Mitigation Measure 4.6-1c (General Avoidance and Minimization Measures)</b> and only with authorization from USFWS and CDFW.</li> <li>The qualified biologist shall monitor vegetation removal and grading inside the exclusion fence as specified in <b>Mitigation Measure 4.6-1c (General Avoidance and Minimization Measures)</b>.</li> <li>If take authorization is not obtained from CDFW and USFWS for California tiger salamander, then all small mammal burrows within dispersal distance of a known or potential breeding pond shall be avoided by a minimum buffer of 50 feet.</li> </ol>	X			X	X	X	X			<p>Prior to, during, and after construction activities.</p> <p>CalAm shall provide the name and qualifications of the biologist(s) to conduct required preconstruction to the CPUC for approval. CalAm shall also provide to the CPUC copies of all frog/salamander surveys and relocation plans, copies of all related USFWS/CDFW-approved plans and related consultations with and authorizations provided by USFWS/CDFW, and avoidance and protection measures and documentary evidence of compliance therewith.</p> <p>Surveys demonstrate absence of frogs/salamanders/habitat or if present that all applicable USFWS/CDFW-approved permits, avoidance and minimization measures, mitigation plans and compensatory mitigation are fully implemented/achieved.</p>



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Inlake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>Upon completion of construction activities, CalAm shall restore California tiger salamander and California red-legged frog habitat temporarily impacted during construction. Compensatory mitigation for permanent impacts shall be provided either onsite or offsite at a minimum ratio of 2:1. Compensation for permanent impacts may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat. At a minimum, the restoration or compensation sites shall meet the following performance standards by the fifth year following restoration:</p> <ol style="list-style-type: none"> <li>Temporarily impacted areas are returned to pre-project or improved conditions;</li> <li>Vegetation cover shall be at least 80 percent of baseline vegetation cover in the impact area; and</li> <li>No more cover by invasive plants than in the baseline conditions of the impact area.</li> </ol> <p><b>Restoration and mitigation activities shall be described in the Habitat Mitigation and Monitoring Plan prescribed by Mitigation Measure 4.6-1a (Habitat Mitigation and Monitoring Plan). Alternatively, compensatory credits may be purchased through an approved mitigation bank, or approved Habitat Conservation Plan.</b></p> <p><b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b></p> <p><b>Mitigation Measure 4.6-1p: Control Measures for Spread of Invasive Plants.</b></p> <p>Construction best management practices shall be implemented in construction areas within or adjacent to lands with native plant communities that may be susceptible to non-native plant species invasion to prevent the spread of invasive plants, seed, propagules, and pathogens through the following actions:</p> <ol style="list-style-type: none"> <li>Avoid driving in or operating equipment in weed-infested areas outside of fenced work areas and restrict travel to established roads.</li> <li>Avoid leaving exposed soil or construction materials in areas with the potential for invasive plants (e.g., in staging areas). Non-active stockpiles shall be covered with plastic or a comparable material.</li> <li>Clean tools, equipment, and vehicles before transporting materials and before entering and leaving work sites (e.g., wheel washing stations at Project site access points). Inspect vehicles and equipment for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas. Designate areas within active construction sites for cleaning and inspections.</li> <li>An environmental inspector, under direction of the Lead Biologist or appointed qualified biologist (see <b>Mitigation Measure 4.6-1a</b>) shall inspect vehicles and equipment prior to project initiation at applicable work areas (listed above) for weed seeds and plant fragments that could colonize within the site or be transported to other sites. At project initiation, all construction vehicles must be cleaned to remove soil and plant fragments at designated locations, and vehicles or equipment that are not clean shall be rejected until clear of weed seed and plant fragments. Wheel washing stations or other methods to remove and contain seeds or other plant fragments from vehicles, equipment, boots, and tools shall be established in designated areas.</li> <li>All equipment and tools involved in soil disturbance at applicable work areas shall be disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use or prior to returning to applicable work areas if used on another project site.</li> <li>Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) shall be used for the project.</li> <li>Within U.S. Army-owned land, control measures for invasive species also shall conform to guidelines in the Integrated Natural Resource Management Plan (INRMP) Presidio of Monterey and Ord Military Community (e.g., Section 9.2.4, Undesirable Plant Pests).</li> </ol> <p>This measure also applies to periodic maintenance of the subsurface slant wells.</p>	X		X	X	X	X	<p>CalAm's environmental monitor shall provide monthly documentation demonstrating oversight and implementation of best management practices for the prevention of spreading of invasive plants.</p> <p>During construction activities and subsequent maintenance activities at the slant well sites.</p>	<p>Compliance with and implementation of all applicable construction best management practices and documentation that doing so prevented spreading of invasive plants during construction and maintenance activities.</p>	

TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria	
	Intake Site	Offshore Brite Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule			
<b>Section 4.6: Terrestrial Biological Resources (cont.)</b>											
<b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b>											
<b>Mitigation Measure 4.6-1q: Frac-out Contingency Plan.</b> CalAm shall retain a licensed geotechnical engineer to develop a Frac-out Contingency Plan (Plan). CalAm will submit the Plan to the appropriate resource agencies (CDPW, CCRWQCB, USACE, USFWS, NIMFS, and local agencies with land use jurisdiction) for approval prior to the start of construction of any pipeline that will use HDD installation. The Plan shall be implemented at all areas where HDD installation under a waterway would occur to avoid, minimize, or mitigate for project impacts either prior to, concurrently with, or following HDD installation, as specified in the Plan. The plan shall include, at a minimum: 1) Measures describing training of construction personnel about monitoring procedures, equipment, materials and procedures in place for the prevention, containment, clean-up (such as creating a containment area and using a pump, using a vacuum truck, etc.), and disposal of released bentonite slurry, and agency notification protocols; 2) Methods for preventing frac-out including maintaining pressure in the borehole to avoid exceeding the strength of the overlying soil. 3) Methods for detecting an accidental release of bentonite slurry that include: (a) monitoring by a minimum of one biological monitor throughout drilling operations to ensure swift response if a frac-out occurs; (b) continuous monitoring of drilling pressures to ensure they do not exceed those needed to penetrate the formation; (c) continuous monitoring of slurry returns at the exit and entry pits to determine if slurry circulation has been lost; and (d) continuous monitoring by spotters to follow the progress of the drill bit during the pilot hole operation, and reaming and pull back operations. 4) Protocols CalAm and/or its contractors will follow if there is a loss of circulation or other indicator of a release of slurry. 5) Cleanup and disposal procedures and equipment CalAm and/or its contractors will use if a frac-out occurs. 6) If a frac-out occurs, CalAm and/or its contractors shall immediately halt work, implement the measures outlined in item 5 of the Plan to contain, clean-up, and dispose of the bentonite slurry, and notify and consult with the staffs of the agencies listed above before HDD activities can begin again. CalAm shall implement this plan to ensure that measures are implemented to prevent frac-out and if a frac-out occurs, then CalAm and/or its contractor shall implement measures to contain, clean-up, and dispose of the bentonite slurry.											
<b>Impact 4.6-1: Result in substantial adverse effects on species identified as candidate, sensitive, or special-status, either directly, indirectly or through habitat modification, during construction.</b>	X			X	X	X	X		See below in Mitigation Measures 4.12-1b and 4.14-2		Compliance with all components of the approved Frac-out Contingency Plan and documentation that doing so avoided injury to or loss of special status plants.
<b>Mitigation Measures 4.12-1b and 4.14-2</b>											
<b>Impact 4.6-2: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.</b>	X			X	X	X	X		See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.6-1l, 4.6-1m, 4.6-1n, 4.6-1o, 4.6-1p, and 4.6-1q		
<b>Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.6-1l, 4.6-1m, 4.6-1n, 4.6-1o, 4.6-1p, and 4.6-1q</b>											
<b>Impact 4.6-2: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.</b>	X			X	X	X	X		See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.6-1l, 4.6-1m, 4.6-1n, 4.6-1o, 4.6-1p, and 4.6-1q		Compliance with all components of all Coastal Development Permits approved for the MPWSP for protection of ESHA.
<b>Mitigation Measure 4.6-2a: Consultation with Local Agencies and the California Coastal Commission regarding Environmentally Sensitive Habitat Areas.</b> Some parts of the project area occur within the Coastal Zone and development within the Coastal Zone would require a Coastal Development Permit.											

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>Prior to the initiation of ground-disturbing activities CalAm shall consult with the CCC or local jurisdiction and obtain the necessary permit(s) in order to proceed with the MPWSP. The CCC or local agency would authorize the project if it conforms to ESHA policies or other policies of the Coastal Act.</p> <p><b>Impact 4.6-2: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during construction.</b></p> <p><b>Mitigation Measure 4.6-2b: Avoid, Minimize, and Compensate for Construction Impacts to Sensitive Communities and Environmentally Sensitive Habitat Areas.</b></p> <p>CalAm and/or its construction contractor(s) shall implement the following avoidance, minimization, and compensation measures for sensitive natural communities, the special-status species that utilize these sensitive communities, environmentally sensitive habitat areas (ESHA) as defined by the California Coastal Commission (CCC) or in a local coastal plan (LCP), and primary habitat as defined in the City of Marina's Local Coastal Land Use Plan (LCLUP). Compensatory mitigation for permanent loss from periodic maintenance of the subsurface slant wells shall only be applied once and would not be applied for each five-year maintenance event.</p> <p>a) Project facilities shall be sited and designed to avoid disturbance of central maritime chaparral, central dune scrub, coast live oak woodland, and riparian woodland and scrub, any areas defined as ESHA by the CCC or in a LCP, sensitive natural communities, including critical habitat, identified within the project area.</p> <p>b) Where direct impacts on sensitive natural communities, ESHA, primary habitat, or critical habitat cannot feasibly be avoided, CalAm shall implement the following measures:</p> <ol style="list-style-type: none"> <li>i. Any temporarily impacted sensitive natural communities, ESHA, primary habitat, and critical habitat, shall be restored to previous conditions or better at the end of construction. Compensatory mitigation for permanent impacts on sensitive natural communities shall occur at a ratio of 2:1 or greater. Compensation for loss of sensitive natural communities may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat. At a minimum the restoration or compensation sites shall meet the following performance standards by the fifth year following restoration: <ol style="list-style-type: none"> <li>a. Temporarily impacted areas are returned to pre-project conditions or greater</li> <li>b. Native vegetation cover shall be at least 70 percent of baseline/impact area native vegetation cover</li> <li>c. No more cover by invasives than the baseline/impact area</li> </ol> </li> <li>ii. Topsoil shall be salvaged during grading and earthmoving activities, stockpiled separately from subsoil, and protected from erosion (e.g., covered or watered). Composting additives shall be used to amend the soil, if needed, and compacted topsoil shall be properly prepared prior to reuse for post-construction restoration of temporarily disturbed areas. A minimum of 12 inches of topsoil shall be salvaged (or if there is less than 12 inches of topsoil initially, as much as is available/practicable).</li> <li>iii. For HMP sensitive natural communities on former Fort Ord lands, plants shall be salvaged, under the direction of a qualified biologist, as necessary per the requirements of the HMP, and in accordance with any requirements from USFWS and CDFW.</li> </ol>	X		X	X	X	X	<p>CalAm shall provide and obtain approval from CPUC of final design submittals demonstrating avoidance of sensitive natural communities and species that utilize them, ESHA and primary/secondary habitat or provide the CPUC with copies of all approved Coastal Development Permits issued by the CCC and applicable local agencies prior to initiation of ground disturbing activities. CalAm's environmental monitor shall provide CPUC with monthly reports demonstrating oversight and successful implementation of the required avoidance, minimization and compensation measures to ensure construction is limited to the design footprint and avoids sensitive communities/species/habitat or that compensatory mitigation was provided.</p> <p>Prior to and during construction.</p> <p>Compliance with all components of all Coastal Development Permits approved for the MPWSP and their conditions for the protection for sensitive natural communities, the special-status species that utilize these sensitive communities, ESHA as defined by the CCC or in a LCP, and primary habitat.</p>	

TABLE 1 (Continued)  
**CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria	
	Intake Site	Offshore Barge Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<b>Section 4.6: Terrestrial Biological Resources (cont.)</b>											
<p>c) Any areas used for staging, laydown, material storage, equipment storage, job trailers, employee parking, or other project-related support activities that do not need to be located adjacent to the active construction area shall be located away from jurisdictional areas, sensitive communities, and shall be protected from stormwater runoff using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers.</p> <p>d) All potential contaminants shall be stored on impervious surfaces, plastic ground covers, or in secondary containment to prevent any spills or leakage from contaminating the ground, and shall be located at least 100 feet from adjacent habitat, unless required for construction activities to be located adjacent to the active construction area.</p> <p>e) Any spillage of pollutants or construction material shall be contained immediately in accordance with the project SWPPP. The contaminated area shall be cleaned and any contaminated materials properly disposed of. The Lead Biologist shall be notified of all spills.</p> <p>Further, CalAm and/or its construction contractor(s) shall implement the following avoidance, minimization, and compensation measures for any areas that are identified as secondary habitat as defined in the City of Marina's LCLUP (and not within ESHA as defined by the CCC) through the coastal permitting process.</p> <p>a) Development shall be designed to prevent significant adverse impacts on primary habitat areas. Adverse impacts that shall be avoided may include indirect impacts such as operational noise impacts on wildlife, introduction of the spread of invasive plant and wildlife species, increased erosion, introduction of trash that would invite predators, increased human disturbance, and decreased water quality.</p> <p>b) All temporarily impacted areas shall be restored to pre-construction conditions or better at the end of construction. Compensatory mitigation for permanent impacts on sensitive natural communities shall occur at a ratio of 1:1 or greater. Compensation for loss of sensitive natural communities may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat. At a minimum the restoration or compensation sites shall meet the following performance standards by the fifth year following restoration:</p> <ol style="list-style-type: none"> <li>Temporarily impacted areas are returned to pre-project conditions or greater</li> <li>Native vegetation cover shall be at least 70 percent of baseline/impact area native vegetation cover</li> <li>No more cover by invasives than the baseline/impact area</li> </ol> <p>Restoration and mitigation activities shall be described in the Habitat Mitigation and Monitoring Plan prescribed by Mitigation Measure 4.6-1n (Habitat Mitigation and Monitoring Plan). Alternatively, credits purchased through an approved mitigation bank, or approved Habitat Conservation Plan.</p> <p><b>Impact 4.6-3: Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the state during construction.</b></p> <p><b>Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1q</b></p> <p><b>Impact 4.6-3: Result in substantial adverse effects on federal wetlands, federal other waters, and/or waters of the state during construction.</b></p> <p><b>Mitigation Measure 4.6-3: Avoid, Minimize, and or Mitigate Impacts to Wetlands.</b></p> <ol style="list-style-type: none"> <li>A jurisdictional wetland delineation shall be conducted to determine the extent of waters of the U.S. and waters of the state within the project component footprints and anticipated construction disturbance area.</li> <li>The proposed project shall be designed to avoid and/or minimize direct impacts on wetlands and/or waters under the jurisdiction of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Wildlife, and/or the California Coastal Commission to the extent feasible. Horizontal Directional Drilling or other trenchless or above water methods will be used at all pipeline crossings of wetlands and other waters of the U.S. and of the state except some small order seasonal or ephemeral drainages which do not support riparian</li> </ol>											
	X		X	X	X		X		See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, and 4.6-1q		
	X		X	X	X		X		CalAm shall provide a copy of the required jurisdictional wetland delineation and all concurrences, approvals and/or related permits issued by the U.S. Army Corps of Engineers, RWQCB, CDFW, and/or the California Coastal Commission. CalAm's environmental monitor shall provide CPUC with monthly reports demonstrating avoidance and/or minimization of impacts on wetlands and/or waters of the U.S. or that compensatory mitigation was provided.	Prior to, during, and after construction.	Documented avoidance, minimization, and/or mitigation of impacts on wetlands consistent with the required jurisdictional wetland delineation and all concurrences, approvals and/or related permits issued by the U.S. Army Corps of Engineers, RWQCB, CDFW, and/or the California Coastal Commission

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carnel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<p><b>Section 4.6: Terrestrial Biological Resources (cont.)</b></p> <p>woodland, riparian scrub, marsh or other wetland vegetation, and which would be crossed during the dry season in the absence of flow or standing water.</p> <p>3. Where disturbance to jurisdictional waters cannot be avoided, any temporarily impacted jurisdictional water shall be restored to pre-construction conditions or better at the end of construction. Compensation for permanent impacts shall be provided at a 2:1 or greater ratio. Compensation for loss of jurisdictional waters may be in the form of permanent on-site or off-site creation, restoration, enhancement, or preservation of habitat. At a minimum, the restoration or compensation sites shall meet the following performance standards by the fifth year following restoration:</p> <ul style="list-style-type: none"> <li>a. Temporarily impacted areas are returned to pre-project conditions or greater</li> <li>b. Wetlands restored or constructed as federal wetlands meet the federal criteria for jurisdictional wetlands and wetlands restored or constructed as state wetlands meet the state criteria for jurisdictional wetlands</li> <li>c. No more cover by invasives than the baseline/impact area</li> </ul> <p>Compensation shall be detailed on a project-specific basis and shall include development of a Wetland Mitigation and Monitoring Plan (WMMP), which shall be developed prior to the start of construction and in coordination with permit applications and/or conditions. At a minimum, the WMMP shall include:</p> <ul style="list-style-type: none"> <li>a. Name and contact information for the property owner of the land on which the mitigation will take place;</li> <li>b. Identification of the source for supplemental irrigation;</li> <li>c. Identification of depth to groundwater;</li> <li>d. Baseline information, including a summary of the findings in any other recent wetland delineations applicable to the project disturbance area;</li> <li>e. Anticipated habitat enhancements to be achieved through compensatory actions;</li> <li>f. Monitoring methods and schedule;</li> <li>g. Performance and success criteria for wetland creation and/or enhancement, with success criteria in tabular form.</li> <li>h. Roles and responsibilities for mitigation funding, implementation, maintenance, monitoring, and reporting.</li> <li>i. Identification of the mechanism that will preserve the mitigation site in perpetuity, if necessary.</li> </ul> <p>Alternatively, offsite mitigation credits may be purchased at an approved mitigation bank; if no banks are available, then alternative mitigation may be achieved through payment of in-lieu fees.</p> <p><b>Impact 4.6-4: Be inconsistent with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b></p> <p><b>Mitigation Measure 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1n, and 4.6-2b</b></p>										
	X		X	X	X	X		See above in Mitigation Measures 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1n, and 4.6-2b		

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines		Monitoring and Reporting Actions: <i>CalAm Reports On, and the CPUC Monitors all Mitigation Measures</i>	Implementation Schedule	
<b>Section 4.6: Terrestrial Biological Resources (cont.)</b>										
<b>Impact Mitigation Measure</b>	X	X	X	X	X	X	X	CalAm shall provide the name and qualifications of the biologist(s) to conduct the comprehensive tree survey to the CPUC for approval. CalAm shall also provide to the CPUC a copy of the survey and related maps and copies of all required tree removal permits issued by applicable local agencies prior to construction.	Prior to and during construction.	Final design plans demonstrate that all trees subject to local tree removal ordinances will be avoided and if not compliance with all tree removal permits and related conditions issued by applicable local agencies shall be implemented.
<b>Section 4.6-4: Be inconsistent with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b>										
<b>Mitigation Measure 4.6-4: Compliance with Local Tree Ordinances.</b>										
1. The project applicant shall perform a comprehensive survey within the project footprint to identify, measure, and map trees subject to local tree removal ordinances (as specified in Table 4.6-10) at least 30 days prior to start of planned ground disturbance or tree removal.										
2. Any trees that are subject to local tree removal ordinances shall be avoided to the extent practicable.										
3. If tree removal cannot be avoided by project construction, then the applicant shall comply with the applicable local tree policies or ordinances, obtain appropriate tree removal permits from applicable local agencies, and comply with those permits.										
4. Tree removal, preservation, or mitigation on Army property would be done in accordance with the Integrated Natural Resource Management Plan Presidio of Monterey and Ord Military Community (November, 2008).										
<b>Impact 4.6-5: Introduce or spread an invasive non-native species during construction.</b>	X	X	X	X	X	X	X	See above in Mitigation Measures 4.6-1a and 4.6-1p		
<b>Mitigation Measures 4.6-1a and 4.6-1p</b>										
<b>Impact 4.6-6: Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.</b>	X	X	X	X	X	X	X	See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.12-1b, 4.12-5, and 4.14-2		
<b>Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.12-5, and 4.14-2</b>										
<b>Impact 4.6-6: Result in substantial adverse effects on candidate, sensitive, or special-status species during project operations.</b>										
<b>Mitigation Measure 4.6-6: Installation and Monitoring of Bird Deterrents at the Brine Storage Basin.</b>										
Bird deterrents (such as reflective flagging, whistles, or a falconer) shall be utilized at the Brine Storage Basin. The type of bird deterrent shall be determined by the lead biologist and shall be modified if, through monitoring (as described below), the bird deterrents are either not sufficient at deterring birds from the Brine Storage Basin or pose a risk to wildlife.										
Monitoring of the Brine Storage Basin shall include the following:										
<ul style="list-style-type: none"> <li><b>Daily Monitoring:</b> CalAm operational staff will monitor the brine pond on a daily basis as part of their regular routine. If staff see regular use of the pond by birds, any dead animals, or any unusual siting, USFWS will be notified within one working day.</li> <li><b>Monthly Monitoring:</b> A qualified biologist and/or qualified biological monitor shall regularly survey the Brine Storage Basin at least once per month starting with the first month of operation of the Brine Storage Basin. The purpose of the surveys shall be to determine if the bird deterrents are effective in excluding birds and to assess whether the deterrents serve as a hazard to birds or wildlife. The monthly surveys shall be conducted in one day for a minimum of two hours following sunrise (i.e., dawn), a minimum of one hour mid-day (i.e., 1100 to 1300), and a minimum of two hours preceding sunset (i.e., dusk) in order to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Operations staff at the MPWSP Desalination Plant shall also report finding any dead birds or other wildlife at the Brine Storage Basin to the Lead Biologist within one day of the detection of the carcass. The Lead Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to CalAm, CDFW, and USFWS.</li> </ul>										
								CalAm shall provide to the CPUC information regarding all bird deterrents utilized, copies of all staff monitoring reports, biologist/biological monitor survey reports and any related correspondence to or additional bird deterrent conditions required or authorizations provided by USFWS/CDFW. A Lead Biologist hired by CalAm will oversee the installation and monitoring of bird deterrents at the Brine Storage Basin. The Lead Biologist will report deaths or entanglements of any birds or wildlife to CPUC, CalAm, CDFW, and USFWS. The Lead Biologist will review deterrent monitoring reports and modify the bird deterrent program through adaptive management measures.	During the operation of the Brine Storage Basin.	Successful deterrent of birds documented in monitoring reports.

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria		
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule			
<b>Section 4.6: Terrestrial Biological Resources (cont.)</b>											
<ul style="list-style-type: none"> <li><b>Quarterly Monitoring:</b> If after 12 consecutive monthly site visits (described above) no bird or wildlife deaths are detected at the Brine Storage Basin by or reported to the Lead Biologist, monitoring can be reduced to quarterly visits.</li> <li><b>Biannual Monitoring:</b> If after 12 consecutive quarterly site visits (described above) no bird or wildlife deaths are detected by or reported to the Lead Biologist, future surveys may be reduced to two surveys per year, during the spring nesting season and during fall migration.</li> <li><b>Modification of Monitoring Program:</b> The Lead Biologist shall modify the monitoring program based on information acquired during monitoring if any changes are needed, and determine adaptive management measures to remedy any problems that are detected during monitoring or modifications if bird impacts are observed.</li> </ul>	X										
	<b>Impact 4.6-7: Result in substantial adverse effects on riparian habitat, critical habitat, or other sensitive natural communities during project operations.</b>			X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1n, 4.6-1p, 4.6-2a, and 4.6-2b	
	<b>Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1n, 4.6-1p, 4.6-2a, and 4.6-2b</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1b, and 4.6-1c	
	<b>Impact 4.6-8: Result in substantial adverse effects on federal wetlands, federal other waters, and waters of the state during project operations.</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a and 4.6-1p	
<b>Mitigation Measures 4.6-1a, 4.6-1b, and 4.6-1c</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1n, and 4.6-2b		
<b>Impact 4.6-9: Introduce or spread an invasive non-native species during project operations.</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1n, and 4.6-2b		
<b>Mitigation Measures 4.6-1a and 4.6-1p</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1n, and 4.6-2b		
<b>Impact 4.6-10: Be inconsistent with the provisions of an adopted Habitat Conservation Plan, natural community conservation plan or other approved local, regional, or state habitat conservation plan.</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.6-1l, 4.6-1m, 4.6-1n, 4.6-1p, 4.6-2a, 4.6-2b, 4.6-3, 4.6-4, 4.6-5, 4.6-6, 4.12-1b, 4.12-5, and 4.14-2		
<b>Mitigation Measures 4.6-1a, 4.6-1n, and 4.6-2b</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1n, and 4.6-2b		
<b>Impact 4.6-C: Cumulative impacts related to terrestrial biological resources.</b>	X		X	X	X				See above in Mitigation Measures 4.6-1a, 4.6-1b, 4.6-1c, 4.6-1d, 4.6-1e, 4.6-1f, 4.6-1g, 4.6-1h, 4.6-1i, 4.6-1j, 4.6-1k, 4.6-1l, 4.6-1m, 4.6-1n, 4.6-1p, 4.6-2a, 4.6-2b, 4.6-3, 4.6-4, 4.6-5, 4.6-6, 4.12-1b, 4.12-5, and 4.14-2		
<b>Section 4.7: Hazards and Hazardous Materials</b>											
<b>Impact 4.7-2: Encountering hazardous materials from other hazardous materials release sites during construction.</b>	X		X	X	X				Through contract specifications, CalAm's contractors will prepare Health and Safety Plans, as reviewed and approved by CPUC prior to construction.	Prior to and during construction.	Compliance with all components of the approved Health and Safety Plan.
<b>Mitigation Measure 4.7-2a: Health and Safety Plan.</b>			X	X	X						
The construction contractor(s) shall prepare and implement a site-specific Health and Safety Plan as required by and in accordance with 29 CFR 1910.120 to protect construction workers and the public during all excavation and grading activities. This plan shall be submitted to the California Public Utilities Commission for review prior to commencement of construction. The Health and Safety Plan shall include, but is not limited to, the following elements:			X	X	X						
<ul style="list-style-type: none"> <li>Designation of a trained, experienced site safety and health supervisor who has the responsibility and authority to develop and implement the site health and safety plan;</li> <li>A summary of all potential risks to construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals;</li> </ul>			X	X	X						

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<b>Section 4.7: Hazards and Hazardous Materials (cont.)</b>										
<ul style="list-style-type: none"> <li>Specified personal protective equipment and decontamination procedures, if needed;</li> <li>Emergency procedures, including route to the nearest hospital; and</li> <li>Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, notifying Monterey County Department of Environmental Health, and retaining a qualified environmental firm to perform sampling and remediation.</li> </ul>										
<b>Impact 4.7-2: Encountering hazardous materials from other hazardous materials release sites during construction.</b>	X		X	X	X	X	CalAm, or its contractor through contract specifications, shall prepare and provide a Soil and Groundwater Management Plan for review and approval by CPUC and MBNMS prior to commencement of construction.	Prior to and during construction.	Compliance with all components of the approved Soil and Groundwater Management Plan.	
<p><b>Mitigation Measure 4.7-2b: Soil and Groundwater Management Plan.</b></p> <p>In support of the Health and Safety Plan described above, CalAm or its contractor shall develop and implement a Soil and Groundwater Management Plan that includes a materials disposal plan specifying how the construction contractor will remove, handle, transport, and dispose of all excavated material in a safe, appropriate, and lawful manner. The plan must identify protocols for soil testing and disposal, identify the approved disposal site, and include written documentation that the disposal site will accept the waste. Contract specifications shall mandate full compliance with all applicable local, state, and federal regulations related to the identification, transportation, and disposal of hazardous materials, including those encountered in excavated soil or dewatering effluent.</p> <p>As part of the Soil and Groundwater Management Plan, CalAm or its contractor shall develop a groundwater dewatering control and disposal plan specifying how contaminated groundwater (dewatering effluent), if encountered, will be handled and disposed of in a safe, appropriate and lawful manner. The plan must identify the locations at which groundwater dewatering is likely to be required, the method to analyze groundwater for hazardous materials, and the appropriate treatment and/or disposal methods. If the dewatering effluent contains contaminants that exceed the requirements of the <i>General WDRs for Discharges with a Low Threat to Water Quality</i> (Order No. R3-2011-0223, NPDES Permit No. CAG993001), the construction contractor shall contain the dewatering effluent in a portable holding tank for appropriate onsite disposal or discharge (see Section 4.5.3 in Section 4.3, Surface Water Hydrology and Water Quality, for more information regarding this NPDES permit). The contractor can either dispose of the contaminated effluent at a permitted waste management facility or discharge the effluent, under permit, to a publicly owned treatment works such as the M1W Regional Wastewater Treatment Plant. This plan shall be submitted to the California Public Utilities Commission and Monterey Bay National Marine Sanctuary for review and approval prior to commencement of construction.</p>										
<b>Impact 4.7-C: Cumulative impacts related to hazards and hazardous materials.</b>	X		X	X	X	X	See above in Mitigation Measures 4.7-1a and 4.7-1b			
<b>Mitigation Measures 4.7-2a and 4.7-2b</b>										
<b>Section 4.8: Land Use, Land Use Planning, and Recreation</b>										
<b>Impact 4.8-2: Disrupt or preclude public access to or along the coast during construction.</b>	X		X			X	See below in Mitigation Measure 4.9-1			
<b>Mitigation Measure 4.9-1</b>										
<b>Impact 4.8-C: Cumulative impacts related to land use and recreation.</b>										
<b>Mitigation Measure 4.9-1</b>										



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<p><b>Section 4.9: Traffic and Transportation</b></p> <p><b>Impact 4.9-1: Temporary traffic increases on regional and local roadways due to construction-related vehicle trips.</b></p> <p><b>Mitigation Measure 4.9-1: Traffic Control and Safety Assurance Plan.</b></p> <p>CalAm and/or the construction contractor(s) shall obtain any necessary road encroachment permits (e.g., from Caltrans and/or the U.S. Army) prior to constructing each project component and shall comply with the conditions of approval attached to all project permits and approvals. As part of the road encroachment permit process, a qualified traffic engineer shall prepare a traffic control and safety assurance plan in accordance with professional engineering standards and submit the plan to the agencies with jurisdiction over the affected roads and recreational trails, as well as to the California Public Utilities Commission, for review and approval. For all project construction activities that could affect the public right-of-way (e.g., roadways, sidewalks, and walkways), the plan shall include measures that would provide for continuity of vehicular, pedestrian, and bicyclist traffic; reduce the potential for traffic accidents; and ensure worker safety in construction zones. Where project construction activities could disrupt mobility and access for bicyclists and pedestrians, the plan shall include measures to ensure safe and convenient access, including recreation and coastal, would be maintained.</p> <p>The traffic control and safety assurance plan shall be developed on the basis of detailed design plans for the approved project. The plan shall include, but not necessarily be limited to, the elements listed below:</p> <ul style="list-style-type: none"> <li>Develop circulation and detour plans to minimize impacts on local streets. Haul routes that minimize truck traffic on local roadways and residential streets shall be used. As necessary, signage and/or flaggers shall be used to guide vehicles through the construction work areas.</li> <li>Control and monitor construction vehicle movements by enforcing standard construction specifications through periodic onsite inspections.</li> <li>Install traffic control devices where traffic conditions warrant, as specified in the applicable jurisdiction's standards (e.g., the <i>California Manual of Uniform Traffic Controls for Construction and Maintenance Work Zones</i>).</li> <li>Schedule truck trips outside of peak morning and evening commute hours to minimize adverse impacts on traffic flow (i.e., if agencies with jurisdiction over the affected roads identify highly congested roadway segments during their review of the encroachment permit applications).</li> <li>Post detour signs along affected roadways to notify motorists of alternative routes.</li> <li>Perform construction that crosses on-street and off-street bikeways, sidewalks, and other walkways in a manner that allows for safe access for bicyclists and pedestrians. Alternatively, provide safe detours to reroute affected bicycle/pedestrian traffic.</li> <li>At least two weeks prior to construction, post signage along all potentially affected recreational trails and coastal access point; Class I, II, and III bicycle routes; and pedestrian pathways, including the Monterey Peninsula Recreational Trail, to warn bicyclists and pedestrians of construction activities. The signs shall include information regarding the nature of construction activities, duration, and detour routes. Signage shall be composed of or encased in weatherproof material and posted in conspicuous locations, including on park message boards, and existing wayfinding signage and kiosks, for the duration of the closure period. At the end of the closure period, CalAm or its contractors shall retrieve all notice materials.</li> <li>CalAm and its contractors shall schedule construction activities to minimize impacts during heavy recreational use periods (e.g., weekends and holidays).</li> </ul>	X		X	X	X	X	<p>CalAm, or its contractor through contract specifications, shall prepare the required Traffic Control and Safety Assurance Plan based on final detailed project design plans and provide it to the CPUC for review and approval, together with copies of all road encroachment permits approved/issued by Caltrans, the U.S. Army and/or local agencies, prior to construction.</p>	<p>Prior to and during construction.</p>	<p>Compliance with all components of the CPUC-approved Traffic Control and Safety Assurance Plan and all road encroachment permits (and conditions thereto) required and approved/issued for the MPWSP.</p>

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)								Monitoring and Reporting Program	Effectiveness Criteria	
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule			
<b>Section 4.9: Traffic and Transportation (cont.)</b>											
<ul style="list-style-type: none"> <li>Implement a public information program to notify motorists, bicyclists, nearby residents, and adjacent businesses of the impending construction activities (e.g., media coverage, email notices, websites, etc.). Notices of the location(s) and timing of road closures shall be published in local newspapers and on available websites to allow motorists to select alternative routes. This provision shall be implemented in conjunction with <b>Mitigation Measure 4.12-1a (Neighborhood Notice)</b>.</li> <li>Consult with non-jurisdictional parties (e.g., CEMEX), as appropriate, regarding strategies for reducing increased traffic on roads that would provide access to construction work areas.</li> <li>Store all equipment and materials in designated contractor staging areas.</li> <li>Maintain alternate one-way traffic flow past the construction zone where possible.</li> <li>Install detour signs to direct traffic to alternative routes around the closed road segment if alternate one-way traffic flow cannot be maintained past the construction zone.</li> <li>Limit lane closures during peak hours.</li> <li>Restore roads and streets to normal operation by covering trenches with steel plates outside of normal work hours or when work is not in progress.</li> <li>Comply with roadside safety protocols to reduce the risk of accidents. Provide "Road Work Ahead" warning signs and speed control (including signs informing drivers of state-legislated double lines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone. Train construction personnel to apply appropriate safety measures as described in the traffic control and safety assurance plan.</li> <li>Maintain access for emergency vehicles at all times. Coordinate with facility owners or administrators of sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Provide advance notification to local police, fire, and emergency service providers of the timing, location, and duration of construction activities that could affect the movement of emergency vehicles on area roadways.</li> <li>Develop a school traffic and pedestrian safety plan to minimize adverse impacts associated with truck trips and lane closures (e.g., in the vicinity of the Marshall Elementary School east of the General Jim Moore Boulevard / Normandy Road intersection).</li> <li>Avoid truck trips through designated school zones during the school drop-off and pickup hours to the extent feasible.</li> <li>Provide flaggers in school areas at street crossings to manage traffic flow and maintain traffic safety during the school drop-off and pickup hours on days when pipeline installation would occur in designated school zones.</li> <li>Coordinate with Monterey-Salinas Transit so the transit provider can temporarily relocate bus routes or bus stops in work zones as deemed necessary.</li> </ul>	X										
<b>Impact 4.9-2: Temporary reduction in roadway capacities and increased traffic delays during construction.</b> <b>Mitigation Measure 4.9-1</b>											
<b>Impact 4.9-3: Increased traffic safety hazards for vehicles, bicyclists, and pedestrians on public roadways during construction.</b> <b>Mitigation Measure 4.9-1</b>	X										
<b>Impact 4.9-4: Impaired emergency access during construction.</b> <b>Mitigation Measure 4.9-1</b>	X										

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.9: Traffic and Transportation (cont.)</b>									
<b>Impact 4.9-5: Temporary disruptions to public transportation, bicycle, and pedestrian facilities during construction.</b>								See above in Mitigation Measure 4.9-1	
<b>Mitigation Measure 4.9-1</b>	X		X	X	X	X			
<b>Impact 4.9-6: Increased wear-and-tear on the designated haul routes used by construction vehicles.</b>	X		X	X	X	X			Rehabilitation of roads and road segments affected by project construction to pre-construction or better conditions, as identified by required agreement between CalAm and affected jurisdictions.
<b>Mitigation Measure 4.9-6: Roadway Rehabilitation Program.</b> Prior to commencing project construction, CalAm and the affected jurisdiction(s) shall enter into an agreement detailing the preconstruction condition of all major project-related construction access and haul routes, in addition to any appropriate post-construction roadway rehabilitation requirements (e.g., who would make the roadway repair, and by when). Temporary detour routes may also be included in the inventory of preconstruction road conditions, if appropriate. The construction routes identified in the rehabilitation program must be consistent with those identified in the construction traffic control and safety assurance plan developed under Mitigation Measure 4.9-1. Roads damaged by project-related construction vehicles shall be repaired to a structural condition equal to that which existed prior to construction activities. CalAm shall be responsible for paying for all repairs needed to fix the damage caused by project-related construction vehicles.									Prior to and after construction.
<b>Impact 4.9-7: Parking interference during construction.</b>	X		X	X	X	X			Coordination of contractors with affected jurisdictions and parties that avoids or minimizes parking impacts in public parking lots.
<b>Mitigation Measure 4.9-7: Construction Parking Requirements.</b> Prior to commencing project construction, the construction contractor(s) shall coordinate with the affected jurisdictions (i.e., Monterey County, Cal State Monterey, and the cities of Marina and Seaside), and affected parties (i.e., the Walmart Superstore at 150 Beach Road), to design the staging areas to avoid or minimize parking impacts in the publicly used parking lots.									Prior to and during construction.
<b>Impact 4.9-C: Cumulative impacts related to traffic and transportation.</b>	X		X	X	X	X			Coordination of contractors with affected jurisdictions and parties that avoids or minimizes parking impacts in public parking lots. CPUC and local jurisdictions will monitor the parking coordination.
<b>Mitigation Measures 4.9-1, 4.9-6, and 4.9-7</b>								See above in Mitigation Measures 4.9-1, 4.9-6, and 4.9-7	
<b>Impact 4.9-C: Cumulative impacts related to traffic and transportation.</b>	X		X	X	X	X			Implementation of a Construction Traffic Coordination plan by CalAm that reduces cumulative effect of overlapping construction traffic in the affected jurisdictions. Continuous coordination between CalAm and affected jurisdictions that result in adjustments and refinements reducing traffic impacts.
<b>Mitigation Measure 4.9-C: Construction Traffic Coordination Plan.</b> CalAm shall coordinate with the appropriate planning agency within each affected jurisdiction to develop and implement a Construction Traffic Coordination Plan. The purpose of the plan shall be to lessen the cumulative effects of MPWSP and local development project construction-related traffic delays and congestion. The plan shall address construction-related traffic associated with all project sites in the vicinity of MPWSP project components (i.e., within 1 mile or would use the same roads) and whose construction schedules overlap that of the MPWSP. The construction traffic coordination plan shall, at a minimum, include the following components: <ul style="list-style-type: none"> <li>• Identification of all projects located in the vicinity of MPWSP project components (within 1 mile or would use the same roads) and whose construction schedules overlap that of the MPWSP.</li> <li>• Consideration for the types of construction-related vehicles and corresponding numbers and timing of trips associated with each said project.</li> <li>• An evaluation of roadways affected by construction activities and measures to minimize roadway and traffic disturbances (e.g., lane closures and detours). Impact minimization measures shall include, but not necessarily be limited to, elements that are part of the MPWSP's Traffic Control and Safety Assurance Plan (Mitigation Measure 4.9-1).</li> <li>• Phasing of construction activities, as necessary to prevent degradation of levels of service on affected roadways.</li> </ul>									Prior to and during construction.

TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures		
<b>Section 4.9: Traffic and Transportation (cont.)</b>									
<ul style="list-style-type: none"> <li>A program that provides for continual coordination with the affected agencies to allow for adjustments and refinements to the plan once construction is underway.</li> </ul> <p>The construction traffic plan may be modeled after or included within the plan described in <b>Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan)</b>. If necessary, separate construction traffic coordination plans (i.e., one for each affected jurisdiction) may be prepared, provided each is compatible.</p>									
<b>Section 4.10: Air Quality</b>									
<p><b>Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.</b></p> <p>For diesel-fueled off-road construction equipment of more than 50 horsepower, CalAm and/or its construction contractor shall make a good faith effort to use available construction equipment that meets the highest USEPA-certified tiered emission standards or is alternatively powered (e.g., with electricity, natural gas, propane, methanol and ethanol blends, or gasoline) construction equipment. For all pieces of equipment that would neither meet Tier 4 emission standards nor be alternatively powered, CalAm or its construction contractor shall provide to the CPUC documentation from two local heavy construction equipment rental companies that indicate that the companies do not have access to higher-tiered equipment or alternatively powered equipment for the given class of equipment. Such documentation shall be provided to the CPUC at least two weeks prior to the anticipated use of those pieces of equipment.</p>	X	X	X	X	X	X	CalAm shall provide the CPUC with documentation demonstrating that its construction contractor(s) successfully procured non-diesel-fueled construction equipment or diesel-fueled equipment that meets U.S. EPA Tier 4 emission standards or, in the alternative, documentation from two local heavy construction equipment rental companies indicating that the companies do not have access to such Tier 4 compliant or non-diesel-fueled equipment prior to commencement of construction. CPUC will monitor the efforts of CalAm and its contractors use of high-tiered construction equipment.	Prior to and during construction.	Documented use of available Tier 4 compliant or non-diesel-fueled construction equipment.
<p><b>Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.</b></p> <p><b>Mitigation Measure 4.10-1b: Idling Restrictions.</b></p> <p>In order to ensure that idling time for on road vehicles with a gross vehicular weight rating of 10,000 pounds or greater does not exceed the 5-minute limit established in Section 2485 of Title 13 CCR Section 2485, and that idling time for off-road engines does not exceed the 5 minute limit established in Title 13 CCR Section 2449(d)(3), CalAm and/or its construction contractor(s) shall prepare and implement a written idling policy and distribute it to all equipment operators. The idling policy shall extend the 5-minute idling limit to cover all on road vehicles (regardless of gross vehicular weight rating) and shall further require that for all diesel-powered off-road engines, the idling limit is reduced to 2 minutes, while maintaining the exceptions specified in Title 13 CCR Section 2449(d)(3). Clear signage of these requirements shall be provided for construction workers at all access points to construction areas.</p>	X	X	X	X	X	X	CalAm shall provide the CPUC and all of its construction equipment operators with a copy of the required written idling policy and evidence of signs containing the requirements of the policy provided/placed at all access points to construction areas prior to the use of any such area, or its contractors through contract specifications, will prepare and implement a written idling policy and distribute to all equipment operators with idling time restrictions for all vehicles. Signage of the idling requirements will be posted at all construction sites. CPUC will review and monitor idling policy implementation.	Prior to and during construction.	Compliance with all components of the required idling policy.
<p><b>Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.</b></p> <p><b>Mitigation Measure 4.10-1c: Construction Fugitive Dust Control Plan.</b></p> <p>CalAm shall require its construction contractor(s) to implement a dust control plan that includes, at minimum, the following dust control measures:</p> <ul style="list-style-type: none"> <li>Water all active construction areas at least three times daily;</li> <li>Cover all trucks hauling soil, sand, and other loose materials and require trucks to maintain at least 2 feet of freeboard;</li> <li>Apply water three times daily, or apply (non-toxic) soil stabilizers, on unpaved access roads, parking areas, and staging areas at construction sites;</li> <li>Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites;</li> </ul>	X	X	X	X	X	X	CalAm shall provide the CPUC with evidence, via copies of its construction contracts, signage or otherwise, demonstrating the measures included in and methods of implementing the required Fugitive Dust Control Plan (including its dust complaint requirements) prior to the commencement of construction. CPUC will monitor the efforts of CalAm and its contractors implementation of the dust plan.	Prior to and during construction.	Compliance with all components of the required Fugitive Dust Control Plan.

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.10: Air Quality (cont.)</b>									
<ul style="list-style-type: none"> <li>Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets;</li> <li>Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for 10 days or more);</li> <li>Enclose, cover, or water twice daily exposed stockpiles (dirt, sand, etc.);</li> <li>Limit traffic speeds on unpaved roads to 15 miles per hour;</li> <li>Install sandbags or other erosion control measures to prevent silt runoff to public roadways;</li> <li>Replant native, drought-tolerant vegetation in disturbed areas as quickly as possible;</li> <li>Wheel washers shall be installed and used by truck operators at the exits of the construction sites to the MPWSP Desalination Plant, the slant wells, and the ASR well facilities; and</li> <li>Post a publicly visible sign that specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Unified Air Pollution Control District (MBUAPCD) shall also be visible to ensure compliance with MBUAPCD rules.</li> </ul>	X	X	X	X	X	X			
<p><b>Impact 4.10-1: Generate emissions of criteria air pollutants and contribute to a violation of an ambient air quality standard during construction.</b></p> <p><b>Mitigation Measure 4.10-1e: Off-site Mitigation Program.</b></p> <p>CalAm shall work with the Monterey Bay Air Resources District (MBARD) and put forth a good faith effort to fund an off-site mitigation program that would be contemporaneous with project construction to offset construction-related NOx. CalAm shall provide to the lead agencies documentation showing that it has reached an agreement with MBARD to fund an off-site emissions mitigation program that shall include offsets to be executed during construction of the project. If such a program is determined by CalAm and MBARD to be infeasible given the construction schedule of the project, CalAm shall provide documentation to the Lead Agencies that substantiates such a determination. All documentation shall be provided to the Lead Agencies at least two weeks prior to the commencement of construction.</p> <p><b>Impact 4.10-2: Construction activities could conflict with implementation of the applicable air quality plan.</b></p> <p><b>Mitigation Measures 4.10-1a, 4.10-1b, and 4.10-1e</b></p>	X	X	X	X	X	X	CalAm shall provide the CPUC at least two weeks prior to commencement of construction with a fully-executed copy of the agreement entered into with MBARD to fund the required off-site mitigation program, or documentation demonstrating that CalAm and MBARD determined such a program was infeasible given the MPWSP construction schedule.	At least two weeks prior to and during construction.	Fund and implement off-site mitigation for NOx emissions at the same time as construction activities in compliance with CalAm's agreement, if any, with MBARD.
<p><b>Impact 4.10-C: Cumulative impacts related to air quality.</b></p> <p><b>Mitigation Measures 4.10-1a through 4.10-1e</b></p>	X	X	X	X	X	X	See above under Mitigation Measures 4.10-1a, 4.10-1b, and 4.10-1e		
<p><b>Section 4.11: Greenhouse Gas Emissions</b></p> <p><b>Impact 4.11-1: Incremental contribution to climate change from GHG emissions associated with the proposed project.</b></p> <p><b>Mitigation Measure 4.11-1: GHG Emissions Reductions Plan.</b></p> <p>(a) <b>Energy Conservation Technologies.</b> CalAm shall have a qualified professional (a licensed mechanical engineer or other appropriately certified professional approved by the CPUC) prepare and submit a GHG Emissions Reduction Plan (Plan) to the CPUC for approval prior to the start of project construction activities. Once approved by the CPUC, the Plan shall be implemented. The Plan shall include a detailed description of the carbon footprint for all operational components of the approved project (e.g., slant well pumping, the MPWSP Desalination Plant, transmission of source and product water, ASR system) based on manufacturer energy usage specification data for each piece of equipment and the most current power system emissions factor for GHG emissions based on the energy portfolio of PG&amp;E, the applicable Electric Service Provider under Direct Access service, or Monterey Bay Community Power and its successors and assigns, as applicable.</p>	X	X	X	X	X	X	CalAm shall submit to the CPUC for review and approval the name and credentials of the qualified professional proposed to prepare the required GHG Emissions Reductions Plan; The Plan shall be submitted to CPUC for approval prior to commencement of construction. CPUC will monitor the progress and effectiveness of the Plan.	Prior to project construction and during project operation.	Implementation of and compliance with the required GHG Emissions Reduction Plan to achieve the required net zero emissions standard.

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brite Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Conveyance Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures		
<p><b>Section 4.11: Greenhouse Gas Emissions (cont.)</b></p> <p>The Plan shall include a summary of state-of-the-art energy recovery and conservation technologies available for utility scale desalination facilities and shall include a commitment by CalAm to incorporate all available feasible energy recovery and conservation technologies; or, if CalAm finds that any of the technologies will not be feasible for the project, the Plan shall clearly explain why such technology is considered to be infeasible. The carbon footprint estimate for the project shall include consideration of all proposed energy recovery and conservation technologies that will be employed by the project, and shall describe the approximate GHG emissions reductions that will be associated with each technology.</p> <p>(b) <b>Renewable Energy.</b> CalAm shall ensure that the approved project's operational electricity use results in net zero GHG emissions. In meeting this net zero GHG emissions requirement, subject to the procedures below, CalAm shall adhere to the following loading order:</p> <ol style="list-style-type: none"> <li>(1) Obtain renewable energy from on-site solar photovoltaic (PV) panels and/or the adjacent Monterey Regional Waste Management District (MRWMD) landfill-gas-to-energy (LFGTE) facility.</li> <li>(2) Procure renewable energy from off-site sources within California via purchases from one or more of the following: (a) PG&amp;E, (b) an Electric Service Provider under Direct Access service, or (c) Monterey Bay Community Power and its successors and assigns.</li> <li>(3) Procure and retire Renewable Energy Certificates (also known as RECs, green tags, Renewable Energy Credits, Renewable Electricity Certificates, or Tradable Renewable Certificates) for projects or activities in California.</li> <li>(4) Procure and retire Carbon Offsets, in a quantity equal to the GHG emissions attributable to the project's operational electricity use. "Carbon Offset" means an instrument issued by an Approved Registry and shall represent the past reduction or sequestration of one metric ton of CO<sub>2</sub>e achieved by any GHG emission reduction project or activity within California. "Approved Registry" means: (i) the Climate Action Reserve, the American Carbon Registry, the Verified Carbon Standard, or the Clean Development Mechanism; or (ii) any other entity approved by the California Air Resources Board to act as an "offset project registry" under the state's Cap-and-Trade Program.</li> </ol> <p>CalAm may meet this net zero GHG emissions requirement via any of the options, or their future equivalents, or any combination of options, or their future equivalents, included in the aforementioned loading order.</p> <p>Further, CalAm shall progress through the loading order on the basis of the options' physical and economic feasibility, as reasonably determined by CalAm, with low-cost options preferred over high-cost options. In the event that options have equivalent costs, options enumerated earlier in the loading order shall be selected by CalAm over options enumerated later in the loading order. On or before June 1 of each year the approved project is in operation, CalAm shall submit documentation to the CPUC demonstrating that the project's operational electricity use in the immediately preceding calendar year resulted in net zero GHG emissions. Calculation of the GHG emissions attributable to the project's operational electricity use (if any) shall be calculated by CalAm on an annual basis using the most up-to-date emissions coefficient for purchased electricity (if any), as compiled or published by PG&amp;E, the applicable Electric Service Provider under Direct Access service, or Monterey Bay Community Power, and its successors and assigns, as applicable. If the CPUC determines that CalAm failed to achieve net zero GHG emissions for the approved project's operational electricity use for a particular year, then the CPUC shall notify CalAm in writing of the exceedance within 45 days of receipt of the documentation submitted by CalAm under this mitigation measure. The notice shall specify the metric tons of GHG emissions that exceeded the net zero obligation. Within 45 days of receipt of this notice, CalAm shall procure and retire Carbon Offsets in an amount at least equivalent to the exceedance, and will submit documentation to the CPUC demonstrating this procurement and retirement.</p>									

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria	
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: Cal/Am Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<b>Section 4.11: Greenhouse Gas Emissions (cont.)</b>										
<i>Impact 4.11-1: Incremental contribution to climate change from GHG emissions associated with the proposed project.</i>	X	X	X	X	X	X	X	See below under Mitigation Measure 4.18-1		
<i>Mitigation Measure 4.18-1</i>										
<i>Impact 4.11-2: Conflict with the Executive Order B-30-15 Emissions Reduction Goal.</i>	X	X	X	X	X	X	X	See above under Mitigation Measure 4.11-1 and below under Mitigation Measure 4.18-1		
<i>Mitigation Measures 4.11-1 and 4.18-1</i>										
<i>Impact 4.11-3: Conflict with AB 32 Climate Change Scoping Plan.</i>	X	X	X	X	X	X	X	See above under Mitigation Measure 4.11-1		
<i>Mitigation Measure 4.11-1</i>										
<i>Impact 4.11-C: Cumulative impacts related to greenhouse gas emissions</i>	X	X	X	X	X	X	X	See above under Mitigation Measure 4.11-1 and below under Mitigation Measure 4.18-1		
<i>Mitigation Measures 4.11-1 and 4.18-1</i>										
<b>Section 4.12: Noise and Vibration</b>										
<i>Impact 4.12-1: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.</i>	X	X	X	X	X	X	X	Cal/Am shall provide the CPUC with the name of Cal/Am's Construction Disturbance Coordinator and copies of the required notice(s) and evidence of all approvals thereof by city planning managers before commencement of construction; Cal/Am shall also provide documentation and evidence demonstrating the timely provision and posting of required notices as well as weekly documentation of all complaints and resolution efforts during project construction.	Prior to and during construction.	Implementation of neighborhood notices prior to construction activities and timely response to inquiries and resolution of complaints by residents.
<b>Mitigation Measure 4.12-1a: Neighborhood Notice and Construction Disturbance Coordinator</b> The combination of public notice and the establishment of a construction disturbance coordinator can result in a lessening of the adversity of the impact at a given receptor by allowing them to prepare for pending construction activities and providing a contact to report any disturbances or violations to Cal/Am for appropriate response actions, including additional mitigation. Residents and other sensitive receptors within 300 feet of a daytime construction area and within 900 feet of a nighttime construction area shall be notified of the construction location, nature of activities, and schedule, in writing, at least 14 days prior to the commencement of construction activities. The notice shall also be posted along the proposed pipeline alignments, near the proposed facility sites, and at nearby recreational facilities. Cal/Am or the contractor(s) shall designate a construction disturbance coordinator who would be responsible for responding to construction complaints. The coordinator shall determine the cause of the complaint and ensure that reasonable measures are implemented to correct the problem. Cal/Am and/or its contractor shall return all calls within 24 hours to answer noise questions and handle complaints. Documentation of the complaint and resolution shall be submitted to the CPUC weekly. A contact number for the construction disturbance coordinator shall be conspicuously placed on construction site fences and included in the notice. Prior to distributing the notice to nearby residences, Cal/Am or the contractor(s) shall first submit the notice to the respective city planning and services manager for review and approval. This measure shall be implemented in conjunction with the noticing provisions in Mitigation Measure 4.9-1 (Traffic Control and Safety Assurance Plan).	X	X	X	X	X	X	X	Cal/Am shall provide the CPUC and all of its construction equipment operators with a copy of the required noise controls directed by Cal/Am's Construction Disturbance Coordinator. Cal/Am shall also provide documentation and evidence demonstrating the required noise controls on construction equipment as documented in weekly reports prepared by the environmental monitor(s). CPUC will monitor the efforts of Cal/Am and its contractors implementation of noise controls.	Prior to and during construction.	Implementation of noise controls on construction equipment.
<i>Impact 4.12-1: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.</i>	X	X	X	X	X	X	X	Cal/Am shall provide the CPUC and all of its construction equipment operators with a copy of the required noise controls directed by Cal/Am's Construction Disturbance Coordinator. Cal/Am shall also provide documentation and evidence demonstrating the required noise controls on construction equipment as documented in weekly reports prepared by the environmental monitor(s). CPUC will monitor the efforts of Cal/Am and its contractors implementation of noise controls.	Prior to and during construction.	Implementation of noise controls on construction equipment.
<b>Mitigation Measure 4.12-1b: General Noise Controls for Construction Equipment and Activities.</b> The construction contractor(s) shall assure that construction equipment with internal combustion engines have sound control devices at least as effective, as those provided by the original equipment manufacturer. No equipment shall be permitted to have an unamplified exhaust.	X	X	X	X	X	X	X	Cal/Am shall provide the CPUC and all of its construction equipment operators with a copy of the required noise controls directed by Cal/Am's Construction Disturbance Coordinator. Cal/Am shall also provide documentation and evidence demonstrating the required noise controls on construction equipment as documented in weekly reports prepared by the environmental monitor(s). CPUC will monitor the efforts of Cal/Am and its contractors implementation of noise controls.	Prior to and during construction.	Implementation of noise controls on construction equipment.

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures		
<p><b>Section 4.12: Noise and Vibration (cont.)</b></p> <p>Impact tools (i.e., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler shall be placed on the compressed air exhaust to lower noise levels by up to approximately 10 dBA. External jackets shall be used on impact tools, where feasible, in order to achieve a further reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.</p> <p>The construction contractor(s) shall locate staging areas and stationary noise sources as far from nearby receptors as possible, and shall muffle and enclose them in temporary sheds, incorporate noise barriers, or implement other noise control measures to the extent feasible. The noise controls shall be sufficient to reduce noise levels during drilling and development of ASR-5 and ASR-6 Wells, and pump station construction activities below the threshold of 70 dBA <math>L_{eq}</math>.</p> <p><b>Impact 4.12-1: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.</b></p> <p><b>Mitigation Measure 4.12-1c: Noise Control Plan for Nighttime Pipeline Construction.</b></p> <p>CalAm or a representative of CalAm shall submit a Noise Control Plan for all nighttime pipeline work to the California Public Utilities Commission for review and approval prior to the commencement of project construction activities. The Noise Control Plan shall identify all feasible noise control procedures to be implemented during nighttime pipeline installation in order to reduce noise levels to the extent practicable at the nearest residential or noise sensitive receptor. At a minimum, the Noise Control Plan shall require use of moveable noise screens, noise blankets, or other suitable sound attenuation devices to be used to reduce noise levels during nighttime pipeline installation activities below 60 dBA <math>L_{eq}</math>.</p> <p><b>Impact 4.12-1: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.</b></p> <p><b>Mitigation Measure 4.12-1d: Additional Noise Controls for ASR-5 and ASR-6 Wells.</b></p> <p>In addition to the general noise controls that will be implemented as part of Mitigation Measure 4.12-1b (General Noise Controls for Construction Equipment), CalAm or its construction contractor(s) for the ASR-5 and ASR-6 Wells shall identify feasible noise controls for implementation during well drilling development activities at the Fitch Park military housing community. The construction contractor(s) shall locate all stationary noise-generating equipment as far as possible from nearby noise-sensitive receptors. Drill rigs within 500 feet of noise-sensitive receptors shall be equipped with noise-reducing engine housings or other noise-reducing technology. Additionally, acoustic barriers and/or enclosures shall be used with a goal of reducing noise from well drilling activities to 60 dBA, <math>L_{eq}</math> or less at a distance of 50 feet from the construction work area. There are a number of options available to achieve this performance standard. Barrier blankets are available with a sound transmission class rating of 32, which can provide 16 to 40 dBA of sound transmission loss, depending on the frequency of the noise source (ENC, 2014). The realized sound transmission reduction of barrier blankets needs to be sufficient to achieve the performance standard of 60 dBA, <math>L_{eq}</math> or less at a distance of 50 feet from the construction work area.</p> <p><b>Impact 4.12-1: Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity during construction.</b></p> <p><b>Mitigation Measure 4.12-1e: Offsite Accommodations for Substantially Affected Nighttime Receptors.</b></p> <p>CalAm shall provide temporary hotel accommodations for all residences and any other nighttime sensitive:</p> <ol style="list-style-type: none"> <li>1. That would be exposed to 24-hour project construction activities and</li> <li>2. Where nighttime construction noise would exceed 60 dBA with windows closed or 35 dBA with windows open, even with implementation of acoustic barriers and/or shielding measures.</li> </ol>	X	X	X	X	X	X	X	<p>Prior to and during nighttime pipeline construction.</p> <p>CalAm shall prepare and provide the required Noise Control Plan for nighttime pipeline construction to the CPUC for approval prior to the commencement of any such nighttime pipeline construction. CPUC will monitor the efforts of CalAm and its contractors' implementation of the noise control plan.</p> <p>CalAm shall provide the CPUC with the required additional noise controls proposed to be implemented for the ASR-5 and ASR-6 Wells for approval before commencement of any such well drilling activities, through contract specifications, will ensure contractors use noise controls on construction equipment at the ASR-5 and -6 wells. CPUC will monitor the efforts of CalAm and its contractors' implementation of noise controls.</p> <p>CalAm shall provide the CPUC with the required additional noise controls proposed to be implemented for the ASR-5 and ASR-6 Wells for approval before commencement of any such well drilling activities, through contract specifications, will ensure contractors use noise controls on construction equipment at the ASR-5 and -6 wells. CPUC will monitor the efforts of CalAm and its contractors' implementation of noise controls.</p>	<p>Compliance with the approved Noise Control Plan and achievement of its less than 60 dBA <math>L_{eq}</math> performance standard.</p> <p>Prior to and during ASR-5 and ASR-6 Well construction.</p> <p>Compliance with the approved additional noise controls on construction equipment at the ASR-5 and -6 wells and achievement of the required less than 60 dBA <math>L_{eq}</math> performance standard.</p> <p>Provision of temporary accommodations and per diem allowances to affected receptors.</p>



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.12: Noise and Vibration (cont.)</b>									
The accommodations shall be provided for the duration of 24-hour construction activities. CalAm shall provide accommodations reasonably similar to those of the impacted residents in terms of number of beds and amenities. If identified accommodations do not include typical residential kitchen facilities (e.g., cooktop, oven, full size refrigerator), then CalAm shall provide displaced individuals with a per diem allowance to offset costs of meals for the period of relocation.	X	X	X	X	X	X	See above under Mitigation Measures 4.12-1b and 4.12-1c		
<b>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.</b> <b>Mitigation Measures 4.12-1b and 4.12-1c</b>	X	X	X	X	X	X	See above under Mitigation Measures 4.12-1b and 4.12-1c		
<b>Impact 4.12-3: Expose people to or generate excessive groundborne vibration during construction.</b> <b>Mitigation Measure 4.12-3: Vibration Reduction Measures.</b> Construction practices shall be utilized that do not generate vibration levels at the closest sensitive land uses above 0.1 in/sec PPV. The following measures, at a minimum, shall be employed to ensure this threshold is met: a. Vibration monitoring shall be conducted for the first 500 feet of pipeline construction for each segment to confirm vibration levels do not exceed the above vibration threshold. If vibration levels exceed the limits of this mitigation measure, construction practices shall be modified to use smaller types of construction equipment or excavator-mounted compaction wheels, operate the equipment in a manner to reduce vibration, or use alternate construction methods, (such as use of manual shoring jacks), and monitoring shall continue for an additional 200 feet or until construction practices meet the required vibration levels. The monitoring in this mitigation measure shall be repeated if the construction methods change in a manner that would increase vibration levels, or when structures are closer to the limits of construction than previous vibration monitoring have confirmed is below the vibration thresholds. b. Smaller vibratory rollers shall be used to minimize vibration levels during repaving activities where needed to meet vibration limits. c. Sheet pile driving for trenchless pipeline installation shall be conducted during daytime hours and access pits shall be located greater than 4.5 feet from standard structures and 80 feet from historic resources.	X	X	X	X	X	X	See above under Mitigation Measure 4.12-1c	Vibration at the closest sensitive land use not exceeding the 0.1 in/sec PPV threshold.	
<b>Impact 4.12-4: Conflict with the construction time limits established by the local jurisdictions.</b> <b>Mitigation Measure 4.12-1c</b>	X	X	X	X	X	X	See above under Mitigation Measure 4.12-1c		
<b>Impact 4.12-4: Conflict with the construction time limits established by the local jurisdictions.</b> <b>Mitigation Measure 4.12-4: Nighttime Construction Restrictions in Marina</b> Open trench pipeline construction work within 500 feet to residential uses or transient lodging shall be restricted to the hours of 7:00 a.m. to 7:00 p.m. (standard time) Monday through Saturday, and 10:00 a.m. to 7:00 p.m. (standard time) on Sundays and holidays. During daylight savings time, construction hours may be extended to 8:00 p.m.						X	CalAm shall provide the CPUC with documentation demonstrating compliance with the required open trench pipeline construction restrictions. CPUC will monitor construction activities in Marina.	Prior to and during construction.	Compliance with the nighttime open trench pipeline construction restrictions in Marina.

TABLE 1 (Continued)  
**CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.12: Noise and Vibration (cont.)</b>									
<b>Impact 4.12-5: Result in a substantial permanent increase in ambient noise levels in the project vicinity during project operations.</b>									
<b>Mitigation Measure 4.12-5: Stationary-Source Noise Controls.</b> CalAm shall retain an acoustical engineer to design stationary-source noise controls and ensure the applicable noise standards are met. At a minimum, all stationary noise sources (e.g., pump station, emergency generators, variable-frequency-drive motors, well heads with motors) shall be located within enclosed structures and with adequate noise screening, as needed, to maintain noise levels to no greater than 5 dBA above the existing monitored ambient values and 60 CNEL, at the property lines of nearby residences and other noise-sensitive receptors. Once the stationary noise sources have been installed, the contractor(s) shall conduct a single long-term (24-hour) monitoring of noise levels to ensure compliance with local noise standards. CalAm shall submit a compliance monitoring report to the CPUC.									
X	X	X	X	X	X	X	CalAm shall provide the CPUC with the name and credentials of the acoustical engineer for approval and documentation showing the stationary-source noise controls the engineer designed as well as demonstrating that implementation of those controls achieved the required noise standards. CPUC will monitor the effectiveness of noise controls.	Prior to project operations.	Compliance with stationary-source noise standard (e.g., no greater than 5 dBA above the existing monitored ambient values and 60 CNEL, at the property lines of nearby residences and other noise-sensitive receptors).
<b>Impact 4.12-C: Cumulative impacts related to noise and vibration.</b>									
<b>Mitigation Measures 4.12-1a, 4.12-1b, 4.12-1c, 4.12-1d, 4.12-1e, and 4.12-3</b>									
<b>Section 4.13: Public Services and Utilities</b>									
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b>									
<b>Mitigation Measure 4.13-1a: Locate and Confirm Utility Lines.</b> Before excavation begins, CalAm or its contractor(s) shall locate all overhead and underground utility lines (such as natural gas, electricity, sewage, telephone, fuel, and water lines) that are reasonably expected to be encountered during excavation. When a project excavation is within the approximate location of a subsurface utility, CalAm or its contractor shall determine the exact location of the underground utility by safe and acceptable means, including the use of hand tools and modern techniques. Information regarding the size, color, and location of existing utilities shall be confirmed before construction activities begin. These utilities shall be highlighted on all construction drawings.									
X	X	X	X	X	X	X	CalAm shall provide to the CPUC final design drawings which highlight all utilities expected to be encountered during excavation for approval before commencement of any excavation and provide documentation demonstrating that the exact location, size and color of all such utilities were confirmed when excavation is within the approximate location of such utilities shown on the design drawings. CPUC and local utilities will review locations identified by the contractors.	Prior to and during construction.	Map utilities on design drawings prior to and confirm and report on exact location, size and color of utilities during excavation.
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b>									
<b>Mitigation Measure 4.13-1b: Coordinate Final Construction Plans with Affected Utilities.</b> CalAm or its contractor(s) shall coordinate final construction plans, schedule, and specifications with affected utilities. Arrangements shall be made with these entities regarding the appropriate protection, relocation, or temporary disconnection of services. If any interruption of service is required, CalAm or its contractor(s) shall notify residents and businesses in the project corridor of any planned utility service disruption at least 2 working days and up to 14 calendar days in advance, in conformance with county and state standards.									
X	X	X	X	X	X	X	CalAm shall provide to the CPUC documentation demonstrating that it coordinated final construction plans, schedule and specifications with all affected utilities and reporting on all arrangements required by the utilities and timely notices provided to residents/businesses concerning any related utility service disruptions. CPUC and local utilities will monitor the arrangements and notifications.	Prior to and during construction.	Compliance with arrangements made in advance with local utilities for the protection, relocation, or temporary disruption in service and timely provision of utility service disruptions to affected customers (i.e., at least 2 working but not more than 14 calendar days in advance of disruption in service).

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program	Effectiveness Criteria	
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance			
<b>Section 4.13: Public Services and Utilities (cont.)</b>							<b>Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures</b>	<b>Implementation Schedule</b>	
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b> <b>Mitigation Measure 4.13-1c: Safeguard Employees from Potential Accidents Related to Underground Utilities.</b> When any excavation is open, the construction contractor(s) shall protect, support, or remove underground utilities as necessary to safeguard employees. The contractor(s) shall be required to provide weekly updates to CalAm and construction workers regarding the planned excavations for the upcoming week, and to specify when construction will occur near a high-priority utility (i.e., pipelines carrying petroleum products, oxygen, chlorine, or toxic or flammable gases; natural gas pipelines greater than 6 inches in diameter or with normal operating pressures greater than 80 pounds per square inch gauge; and underground electric supply lines, conductors, or cables that have a potential to ground more than 300 volts that do not have effectively grounded sheaths). Construction managers shall hold regular tailgate meetings with construction staff on days when work near high-priority utilities will occur to review all safety measures regarding such excavations, including measures identified in the Mitigation Monitoring and Reporting Program and in construction specifications. The contractor shall designate a qualified Health and Safety Officer who shall specify a safe distance to work near high-priority utilities. Excavation near such utility lines shall not be authorized until the designated Health and Safety Officer confirms and documents in the construction records that: (1) the line was appropriately located in the field by the utility owner using as-built drawings and a pipeline-locating device; and (2) the location was verified by hand by the construction contractor.	X	X	X	X	X	X	CalAm shall provide the CPUC with copies of construction contracts containing the requirements of this mitigation, the required weekly updates in advance of construction near high-priority utilities, and evidence that construction managers held safety meetings before work near these utilities occurs. CPUC and local utilities will monitor the safety practices of contractors for work near high-priority utilities.	Prior to and during construction.	Compliance with required safety procedures for work near high-priority utilities.
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b> <b>Mitigation Measure 4.13-1d: Emergency Response Plan.</b> Before commencement of construction, CalAm or its contractor(s) shall develop an emergency response plan that outlines procedures to follow in the event of a leak or explosion and submit a copy to the CPUC and MBNMS. The emergency response plan shall identify the names and phone numbers of staff at the potentially affected utilities that would be available 24 hours per day in the event that construction activities cause damage to or rupture of a high-risk utility. The plan shall also detail emergency response protocols, including notification, inspection, and evacuation procedures; any equipment and vendors necessary to respond to an emergency (such as an alarm system); and routine inspection guidelines.	X	X	X	X	X	X	CalAm shall prepare and provide the required Emergency Response Plan to the CPUC for approval prior to commencement of construction and provide documentation demonstrating that the approved Plan is posted at all job sites. CPUC and MBNMS will review the plan and monitor its implementation by contractors.	Prior to and during construction.	Compliance with all components of the approved Emergency Response Plan and post a copy of the Plan at all job sites.
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b> <b>Mitigation Measure 4.13-1e: Notify Local Fire Departments.</b> CalAm or its contractor(s) shall notify local fire departments in advance of any work that is to be performed within or adjacent to a right-of-way that contains a gas utility line, or any time damage to a gas utility line results in a leak or suspected leak, or whenever damage to any utility results in a threat to public safety.	X	X	X	X	X	X	CalAm shall provide copies of all construction contracts demonstrating contractors are required to notify local fire departments in advance of any work in or adjacent to gas utility lines or any time a gas leak occurs/is suspected or damage to a utility results in a public safety threat as well as copies of all such notifications provided to local fire departments. CPUC and MBNMS will monitor notifications.	Prior to and during construction.	Notification of local fire departments in advance of any work in or adjacent to gas utility lines.
<b>Impact 4.13-1: Disrupt or relocate regional or local utilities during construction.</b> <b>Mitigation Measure 4.13-1f: Ensure Prompt Reconnection of Utilities.</b> CalAm or its contractor(s) shall promptly contact utility providers to reconnect any disconnected utility lines as soon as it is safe to do so.	X	X	X	X	X	X	CalAm shall provide the CPUC with documentation demonstrating that prompt contact with utility providers requesting the reconnection of any disconnected utility lines was made. CPUC and MBNMS will monitor notifications.	During construction.	Notification of local utilities to reconnect service lines when it is safe to do so.

TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.13: Public Services and Utilities (cont.)</b>									
<b>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.</b>	X	X	X	X	X	X	CalAm shall coordinate with the Monterey Regional Waste Management District in preparing and provide the CPUC with the required Construction Waste Reduction and Recycling Plan for approval prior to the commencement of construction. CalAm shall also collect and provide the CPUC with all receipts and other documentation demonstrating that the Plan's waste reduction, recycling and diversion goals were achieved. CPUC and MBNMS will review the plan and monitor its implementation.	Prior to and during construction.	Compliance with all components of the Construction Waste Reduction and Recycling Plan and document achievement of the Plan's waste reduction, recycling and diversion goals.
<b>Mitigation Measure 4.13-2: Construction Waste Reduction and Recycling Plan.</b> The construction contractor(s) shall prepare and implement a construction waste reduction and recycling plan identifying the types of debris the project will generate and the manner in which those waste streams will be handled. In accordance with the California Integrated Waste Management Act of 1989, the plan shall emphasize source reduction measures, followed by recycling and composting methods, to ensure that construction and demolition waste generated by the project is managed consistent with applicable statutes and regulations. In accordance with the California Green Building Standards Code and local regulations, the plan shall specify that all trees, stumps, rocks, and associated vegetation and soils, and 50 percent of all other nonhazardous construction and demolition waste, be diverted from landfill disposal. The plan shall be prepared in coordination with the Monterey Regional Waste Management District and be consistent with Monterey County's Integrated Waste Management Plan. Upon project completion, CalAm shall collect the receipts from the contractor(s) and submit them to the CPUC as documentation that the waste reduction, recycling, and diversion goals have been met.	X	X	X	X	X	X	See above in Mitigation Measures 4.3-4 and 4.3-5		
<b>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.</b>									
<b>Mitigation Measures 4.3-4 and 4.3-5</b>									
<b>Impact 4.13-5: Increased corrosion of the M1W outfall as a result of brine discharges associated with project operations.</b>									
<b>Mitigation Measure 4.13-5a: Replacement of WEKO seal clamps, Periodic Inspections, and As-Needed Repairs for Offshore Segment of M1W Ocean Outfall.</b> Prior to operation of the MPWSP Desalination Plant, and as part of an agreement with M1W to use the outfall for brine discharge, CalAm shall protect the offshore segment of the M1W ocean outfall from corrosion, by replacing the existing WEKO seal clamps in the nearshore portion of the ocean outfall with new corrosion-resistant clamps. Installation of the WEKO seal clamps shall occur prior to relocation of the existing beach junction box to allow for optimal access to the outfall. Construction shall occur in late summer/early fall, during the irrigation season, when flows in the outfall would typically be de minimis; this timing would also be late in the snowy plover nesting season when eggs would have hatched. Access to the offshore portion of the outfall shall be through the existing beach junction box and de minimus flows will continue to be released through the outfall during the installation process. Any emergency high effluent flows resulting from process upsets at the treatment plant or rainfall events, shall be stored and then released through the outfall after the divers have safely exited the outfall. Construction access shall follow along the existing outfall access road. The staging and work area shall be created on already disturbed ground at the western end of the access road and consist of no larger than a 50 square foot area for divers and diving equipment, a 20-foot container for equipment storage and a 5kw generator (in a sound enclosure) to be used if power is not available onsite. If the beach junction box and discharge pipeline are covered by sand, or if sand needs to be removed for staging, excavation would be accomplished using a backhoe or excavator. Up to one-half acre around the junction structure may be disturbed. Three working shifts per day may be required, and the installation would take approximately 6-8 weeks. During construction, beach access shall remain open, with the potential exception of extreme high tide events. The contractor shall install temporary fencing around the construction site and construction shall be prohibited outside of the defined construction, staging, and storage areas. Construction work shall not be conducted seaward of the mean high water line unless tidal waters have receded from the authorized work areas. Construction vehicles operating on	X						Prior to the operation of the MPWSP Desalination Plant, CalAm shall enter into the required agreement with the M1W and provide a copy of that agreement and documentation to the CPUC demonstrating that the existing WEKO seal clamps were replaced in compliance with the M1W's timing requirements. CalAm shall also enter into an agreement with M1W to perform the required periodic inspections of the offshore portion of the M1W outfall and diffuser and provide a copy of that agreement to the CPUC as well as documentation and photographs demonstrating compliance with the required inspections and condition of the outfall and diffuser. CPUC, MBNMS, and M1W will monitor the protection of the outfall.	Prior to and during operation of the MPWSP Desalination Plant.	Installation of new corrosion-resistant clamps prior to operations. Periodic inspections of the offshore portion of the M1W outfall and diffuser and any necessary replacement or maintenance required.

**TABLE 1 (Continued)**  
**CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT**  
**MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Desalination Plant Site	ASR	Carmel Valley Pump Station	Pipeline Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule		
<p><b>Section 4.13: Public Services and Utilities (cont.)</b></p> <p>the beach shall be rubber-tired, and while in operation shall remain as high on the upper beach as possible to avoid contact with ocean waters and intertidal areas. Any construction materials and equipment placed on the beach shall be stored beyond the reach of tidal waters. Materials intended to be left on the beach overnight must be approved by the Coastal Development Permit Issuing and authorizing agencies and shall be subject to a contingency plan for moving materials in the event of a tidal wave/surge. All accessways impacted by construction activities shall be restored to their pre-construction condition or better within 3 days of completion of construction. Any beach sand in the area that is impacted by construction shall be filtered as necessary to remove construction debris. Construction areas shall maintain good construction site housekeeping controls and procedures (leak/spill clean-up; cover equipment in rain; cover exposed piles of soil/waste; dispose of waste properly; remove construction debris from beach). All construction activities that result in discharge of materials, polluted runoff, or wastes to the beach or the adjacent marine environment are prohibited. All exposed slopes and soil surface in and/or adjacent to the construction area shall be stabilized with erosion control best management practices.</p> <p>CalAm shall enter into an agreement with M1W to perform periodic inspections of the offshore portion of the M1W outfall and diffuser. Annual inspections shall occur for the first three years after the MPWSP Desalination Plant is brought online. Thereafter, the offshore portion of the outfall shall be inspected every five years. During each inspection, photo documentation shall be provided for all areas of inspections, regardless of findings, to provide for photographic comparison over time. All inspections shall include documentation of the thickness of scaling, any exposure or corrosion of reinforcing steel, significant cracking or spalling of concrete, and any pitting of metals. Any necessary repairs to the outfall and/or diffuser shall be identified and performed.</p> <p><b>Impact 4.13-5: Increased corrosion of the M1W outfall and diffuser as a result of brine discharges associated with project operations.</b></p> <p><b>Mitigation Measure 4.13-5b: Install Protective Lining in Land Segment of M1W Ocean Outfall.</b></p> <p>Prior to operation of the MPWSP Desalination Plant, and as part of an agreement with M1W to use the outfall for brine discharge, CalAm shall line the land segment of the outfall with a protective liner system.</p> <p>Installation of the liner shall occur only during the irrigation season (April through September), when flows in the outfall would be minimal. Installation of the liner in any given portion of the land segment is not expected to exceed 7 to 10 days. M1W has identified 10 locations within the M1W right-of-way (see Figure 4.13-1) from which</p> <p>CalAm or its contractor can access the land segment for installation of the liner; only these locations shall be used. Contractors shall install temporary fencing to denote the access limits for construction crews. The excavation pit at each access point shall be located directly above the outfall pipe and shall not exceed a size of 12 feet by 25 feet. Soils shall be stockpiled within the existing outfall right-of-way, and topsoil shall be stored in a separate pile for use in restoration following installation. Erosion and dust control measures shall comply with the applicable Stormwater Pollution Prevention Plan (SWPPP). After liner installation, the contractor shall restore soil in the pits to nearly pre-construction compaction levels and shall replace stockpiled topsoil to match pre-construction elevations.</p> <p>To address the small amount of effluent flowing through the portion of the land segment to be lined between April and September, the contractor shall plug and dewater the outfall segment being lined, if needed, and use a 24-inch diameter bypass pipe to divert flows around the affected portion of the outfall.</p> <p><b>Impact 4.13-C: Cumulative impacts related to public services and utilities.</b></p> <p><b>Mitigation Measures 4.3-4, 4.3-5, 4.13-1a, 4.13-1b, 4.13-1c, 4.13-1d, 4.13-1e, 4.13-1f, 4.13-2, 4.13-5a, and 4.13-5b</b></p>	X								<p>Prior to operation of the MPWSP Desalination Plant CalAm shall provide the CPUC with documentation demonstrating that it lined the land segment of the outfall with a protective liner system during the irrigation season and information on the type and specifications of the protective lining system used.</p> <p>Prior to operation of the MPWSP Desalination Plant. MPWSP Desalination Plant.</p> <p>Installation of liner system during irrigation season prior to operation of the MPWSP Desalination Plant.</p>	
	X		X	X	X	X	X	X	X	See above in Mitigation Measures 4.3-4, 4.3-5, 4.13-1a, 4.13-1b, 4.13-1c, 4.13-1d, 4.13-1e, 4.13-1f, 4.13-2, 4.13-5a, and 4.13-5b

TABLE 1 (Continued)  
**CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule	
<b>Section 4.14: Aesthetic Resources</b>									
<b>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.</b>	X	X	X	X	X	X	CalAm shall provide the CPUC with copies of all construction contracts demonstrating inclusion of the required clean and orderly construction site provisions prior to the commencement of construction. CPUC will monitor the maintenance of construction sites.	Prior to and during construction.	Maintain clean and orderly construction site.
<b>Mitigation Measure 4.14-1: Maintain Clean and Orderly Construction Sites.</b> As part of contract specifications, CalAm shall include a requirement that the construction contractor(s) keep staging and construction areas as clean and inconspicuous as practicable by storing construction materials and equipment at the proposed construction staging areas or in areas that are generally away from public view when not in use, and by removing construction debris promptly at regular intervals. If necessary, additional appropriate screening (e.g., temporary opaque fencing) shall be used at construction sites to buffer views or construction equipment and material, where the use of such screening materials would not further degrade the visual character or further obstruct views of scenic resources or vistas in the area. Screening is not required for pipeline construction areas.									
<b>Impact 4.14-2: Temporary sources of substantial light or glare during construction.</b>	X	X	X	X	X	X	CalAm shall provide the CPUC with documentation demonstrating that all planned construction lighting complies with this measure's requirements prior to the commencement of construction. CPUC will monitor the nighttime lighting measures.	Prior to and during construction.	Prevention of nighttime lighting from affecting nighttime views.
<b>Mitigation Measure 4.14-2: Site-Specific Nighttime Lighting Measures.</b> To prevent exterior lighting from affecting nighttime views, the design, construction, and operation of lighting at MPWSP facilities, shall adhere to the following requirements: <ul style="list-style-type: none"> <li>Use of low-intensity street lighting and low-intensity exterior lighting shall be required.</li> <li>Lighting fixtures shall be cast downward and shielded to prevent light from spilling onto adjacent properties, buildings, and roadways.</li> <li>Lighting fixtures shall be designed and placed to minimize glare that could affect users of adjacent properties, buildings, and roadways.</li> <li>Fixtures and standards shall conform to state and local safety and illumination requirements.</li> </ul> CalAm shall ensure these measures are implemented at all times during nighttime construction and for the duration of all required nighttime construction activity.									
<b>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.</b>	X	X	X	X	X	X	CalAm shall provide the CPUC with documentation and photos/colors of the proposed finishes/colors for all exterior finishes and visible structures for approval to ensure all such finishes/structures will be treated with non-reflective, earth-tone finishes as required by this MM. CPUC will review and approve the choice of finishes prior to application.	After construction and during operations.	Application of approved finishes/colors that are compatible with surrounding visual settings.
<b>Mitigation Measure 4.14-3a: Facility Design.</b> CalAm shall avoid reflective exterior finishes and treat visible structures with earth-tone finishes to reduce contrast with the ground surface and increase compatibility with the visual setting. Primary structures shall be treated with complementary colors in the brown, tan, gray, or green color spectrum, or with other natural colors. Choose paint and exterior finishes to ensure that structures blend into the surrounding landscape.									
<b>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.</b>	X	X	X	X	X	X	CalAm shall provide the CPUC with documentation demonstrating proposed fencing, landscaping and other proposed facility screening methods for approval prior to operation of the facilities.	After construction and during operations.	Installation of approved fencing, landscaping and other facility screening methods to ensure project facilities blend in with surrounding community and/or natural settings.
<b>Mitigation Measure 4.14-3b: Facility Screening.</b> CalAm shall ensure that fencing is designed to be minimally intrusive and to complement the architectural character of the proposed facility and the community. Fencing design shall be coordinated with nearby landscaping and MPWSP facility design to ensure all project components blend with the surrounding community and/or natural setting. Native plants, trees, or shrubs shall be used whenever practicable to screen views of the proposed aboveground facilities. Facility screening shall be in keeping with the character of the site and setting, and walled perimeters shall be avoided in natural settings to minimize the dominance of structures.									
<b>Impact 4.14-4: Permanent new sources of light or glare.</b>	X	X	X	X	X	X	See above under Mitigation Measure 4.14-2		
<b>Mitigation Measure 4.14-2</b>									

**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance		
<b>Section 4.14: Aesthetic Resources (cont.)</b>								
<b>Impact 4.14-C: Cumulative impacts related to aesthetic resources.</b> <b>Mitigation Measure 4.14-2</b>	X	X	X	X	X	X	See above under Mitigation Measure 4.14-2	
<b>Section 4.15: Cultural and Paleontological Resources</b>								
<b>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.</b> <b>Mitigation Measure 4.15-2a: Establish Archaeologically Sensitive Areas.</b>	X	X	X	X	X	X	See above under Mitigation Measure 4.14-2	Compliance with all components of the approved Plan and protecting archaeologically sensitive areas. Implementation of the ARDTP.
<p>CalAm shall contract with a qualified archaeologist meeting the Secretary of the Interior's Qualification Standard (Lead Archaeologist) to prepare and implement an Archaeological Monitoring Plan, and oversee and direct all archaeological monitoring activities during project construction. Archaeological monitoring shall be conducted for all subsurface excavation work within 100 feet of the Castroville Pipeline at Tembladero Slough and the Salinas River; and the Source Water Pipeline in the Lapis Sand Mining Plant Historic District. At a minimum, the Archaeological Monitoring Plan shall:</p> <ul style="list-style-type: none"> <li>Detail the cultural resources training program that shall be completed by all construction and field workers involved in ground disturbance;</li> <li>Designate the person(s) responsible for conducting monitoring activities, including Native American monitor(s), if deemed necessary;</li> <li>Establish monitoring protocols to ensure monitoring is conducted in accordance with current professional standards provided by the California Office of Historic Preservation;</li> <li>Establish the template and content requirements for monitoring reports;</li> <li>Establish a schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;</li> <li>Establish protocols for notifications in case of encountering cultural resources, as well as methods for evaluating significance, developing and implementing plan to avoid or mitigate significant resource impacts, Native American participation and consultation, collection and curation plan, and consistency with applicable laws including Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the Public Resources Code;</li> <li>Establish methods to ensure security of cultural resources sites;</li> <li>Describe the appropriate protocols for notifying the County, Native Americans, and local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction with reference to Public Resources Code 5097.99.</li> </ul> <p>During the course of the monitoring, the Lead Archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to encounter resources.</p> <p>If archaeological materials are encountered, all soil disturbing activities within 100 feet of the find shall cease until the resource is evaluated. The Lead Archaeologist shall immediately notify the CPUC and MBNMS of the encountered archaeological resource. The Lead Archaeologist shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological resource, present the findings of this assessment to the Lead Agencies. In the event archaeological resources qualifying as either historical resources pursuant to CEQA Section 15064.5 or as unique archaeological resources as defined by Public Resources Code 21083.2 are encountered, preservation in place shall be the preferred manner of mitigation.</p>							<p>Prior to and during construction.</p> <p>CalAm shall provide the CPUC with the name and qualifications of its archaeologist and a copy of the required Archaeological Monitoring Plan (including a proposed Archaeological Research Design and Treatment Plan) for approval prior to commencement of construction. CPUC and MBNMS will monitor the implementation of the plan.</p>	

TABLE 1 (Continued)  
**CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program	Effectiveness Criteria
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines		
<p><b>Section 4.15: Cultural and Paleontological Resources (cont.)</b></p> <p>If preservation in place is not feasible, the applicant shall implement an Archaeological Research Design and Treatment Plan (ARDTP). The Lead Archaeologist, Native American representatives, MBNMS and the CPUC shall meet to determine the scope of the ARDTP. The ARDTP will identify a program for the treatment and recovery of important scientific data contained within the portions of the archaeological resources located within the project Area of Potential Effects (APE); would preserve any significant historical information obtained and will identify the scientific/historic research questions applicable to the resources; the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The results of the investigation shall be documented in a technical report that provides a full artifact catalog, analysis of items collected, results of any special studies conducted, and interpretations of the resource within a regional and local context. All technical documents shall be placed on file at the Northwest Information Center of the California Historical Resources Information System.</p> <p><b>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.</b></p> <p><b>Mitigation Measure 4.15-2b: Inadvertent Discovery of Cultural Resources.</b>                      Following implementation of Mitigation Measure 4.15-2a, if prehistoric or historic-era cultural materials are encountered, all construction activities within 100 feet shall halt and the Lead Agencies shall be notified. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("middens") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.</p> <p>For discoveries on lands other than Army-owned lands, a Secretary of the Interior-qualified archaeologist shall inspect the find within 24 hours of discovery. If the find is determined to be potentially significant, the archaeologist, in consultation with MBNMS, the CPUC and the appropriate Native American representative shall determine whether preservation in place is feasible. Consistent with CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, a qualified archaeologist, in consultation with the Lead Agency and the appropriate Native American representative, shall prepare and implement a detailed Archaeological Research Design and Treatment Plan (ARDTP). Treatment of unique archaeological resources shall follow the applicable requirements of Public Resources Code Section 21083.2. Treatment for most resources would consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the project. The ARDTP shall include provisions for analysis of data in a regional context, reporting of results within a timely manner and subject to review and comments by the appropriate Native American representative before being finalized, curation of artifacts and data at a local facility acceptable to the appropriate Native American representative, and dissemination of final confidential reports to the appropriate Native American representative, the Northwest Information Center of the California Historical Resources Information System, the CPUC, MBNMS and interested professionals.</p> <p>If cultural resources are inadvertently discovered during construction on Army-owned property, work shall immediately cease within a 100-foot radius of the find and the Army, Presidio of Monterey, Cultural Resources Manager (CRM) will be contacted to assess the discovery. For discoveries on Army lands, the CRM will implement procedures set forth in the Presidio's Integrated Cultural Resources Management Plan (ICRMP) and Army Regulation (AR 200-1), which may include completion of consultation under Section 106 of the National Historic Preservation Act (NHPA) prior to resuming construction in the vicinity of the find. CalAm shall be responsible for completing any additional archaeological work required to comply with federal regulations.</p>	X	X	X	X	X	X	<p>Prior to and during construction.</p> <p>The archaeologist hired by CalAm will notify MBNMS and CPUC if prehistoric or historic-era cultural materials are encountered and will halt construction activities within 100 feet of the found materials. If the find is determined to be potentially significant, the archaeologist, in consultation with MBNMS, the CPUC and the appropriate Native American representative shall determine whether preservation in place is feasible. If avoidance is not feasible, the archaeologist will prepare implement an ARDTP. CPUC, MBNMS, the U.S. Army, and Native American representatives will monitor the implementation of protocols and the ARDTP in the event of a find.</p>	<p>Implementation of construction protocols to protect cultural resources found during construction. Halting construction and implementation of the ARDTP.</p>



**TABLE 1 (Continued)  
CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact Mitigation Measure	Applicable Site(s)						Monitoring and Reporting Program		Effectiveness Criteria										
	Intake Site	Offshore Brine Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines Conveyance	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule											
<b>Section 4.15: Cultural and Paleontological Resources (cont.)</b>																			
<b>Impact Mitigation Measure</b>																			
<b>Section 4.15-4: Disturbance of any human remains, including those interred outside of formal cemeteries, during construction.</b>	X	X	X	X	X	X			Implementing protocols of identification and notification in the event human remains are encountered.										
<b>Mitigation Measure 4.15-4: Inadvertent Discovery of Human Remains.</b> In the event of discovery or recognition of any human remains during construction activities, such activities within 100 feet of the find shall cease. For discoveries on lands other than Army-owned lands, the Monterey County Coroner shall be contacted immediately. The Coroner then has two working days to determine if the remains are Native American. If the remains are determined to be Native American, and no investigation of the cause of death is required, the Native American Heritage Commission (NAHC) shall be contacted within 24 hours. The NAHC shall then identify and contact the person or persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American(s), who in turn would make recommendations to the project applicant, MBNMS and the CPUC for the appropriate means of treating the human remains and any grave goods. If human remains are encountered during construction on Army-owned property, work shall cease within a 100-foot radius of the discovery and the CRM shall be notified immediately. The CRM shall initially evaluate the site to determine if the remains are either Native American in origin or associated with a recent crime scene (i.e. 50 years old or less). If the remains appear recent, the CRM shall notify the Army's Criminal Investigation Command who shall assume control of the crime scene and custody of the remains. If the remains appear to be Native American in origin, the CRM shall notify the Presidio Garrison Commander and implement procedures set forth in Section 3 of the Native American Graves Protection and Repatriation Act.	X	X	X	X	X			During construction.											
<b>Section 4.16: Agricultural Resources</b>																			
<b>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.</b>																			
<b>Mitigation Measure 4.16-1: Minimize Disturbance to Farmland.</b> CalAm and its construction contractor(s) shall incorporate the following measures into construction plans and specifications for all construction activities located in farmland areas to minimize adverse impacts on farmland: <ul style="list-style-type: none"> <li>CalAm shall notify affected property owners at least 90 days prior to initiating construction activities that have the potential to interfere with agricultural operations.</li> <li>Construction contractor(s) shall minimize the extent of the construction disturbance, including construction access, in agricultural areas to the maximum extent feasible. Minimization efforts shall include, but not be limited to, consulting with affected property owners to schedule construction activities to minimize impacts during planting, growing, and/or harvest seasons.</li> <li>During excavation and other earthmoving activities in designated farmland areas, the surface and subsurface soil layers shall be stockpiled separately when trenches are excavated. Segregated topsoil and subsoil shall be maintained and kept separated throughout all construction activities, and these soils shall subsequently be used to backfill excavations and shall be returned to its appropriate location in the soil profile.</li> <li>To avoid over-compaction of the top layers of soil, soil densities shall be measured prior to the start of construction activities, and surface soil (roughly the upper 3 feet of soil) shall be backfilled to within 5 percent of the original density.</li> <li>If necessary, following construction activities, the uppermost 3 feet of soil shall be ripped to achieve the appropriate soil density (within 5 percent of the original). Ripping may also be used in areas where vehicle and equipment traffic has compacted the topsoil layers.</li> </ul>	X								Prior to and during construction.										
																			CalAm shall provide the CPUC with documentation that the required farmland disturbance minimization measures are incorporated into all construction plans and specifications for construction activities located in farmland areas prior to the commencement of construction and provide the CPUC copies of all required notices provided to affected property owners. CPUC and MBNMS will monitor implementation of measures to minimize disturbance to farmlands.

TABLE 1 (Continued)  
 CALAM MONTEREY PENINSULA WATER SUPPLY PROJECT  
 MITIGATION MONITORING AND REPORTING PROGRAM

Impact Mitigation Measure	Applicable Site(s)							Monitoring and Reporting Program		Effectiveness Criteria		
	Intake Site	Offshore Brite Discharge Site	Destination Plant Site	ASR	Carmel Valley Pump Station	Pipelines	Monitoring and Reporting Actions: CalAm Reports On, and the CPUC Monitors all Mitigation Measures	Implementation Schedule				
<b>Section 4.16: Agricultural Resources (cont.)</b>												
<ul style="list-style-type: none"> <li>Existing agricultural drainage systems shall be inspected before and after construction to ensure they function as needed.</li> <li>Disturbed areas shall be restored to pre-construction conditions following construction.</li> </ul>												
		X								See above under Mitigation Measure 4.16-1		
Impact 4.16-C: Cumulative impacts related to agricultural resources. Mitigation Measure 4.16-1			X									
<b>Section 4.18: Energy Conservation</b>												
Impact 4.18-1: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during construction and decommissioning. Mitigation Measure 4.10-1b	X	X	X	X	X	X	X	X	X	X		
Impact 4.18-1: Use large amounts of fuel and energy in an unnecessary, wasteful, or inefficient manner during construction and decommissioning. Mitigation Measure 4.18-1: Construction Equipment and Vehicle Efficiency Plan. CalAm shall contract a qualified professional (i.e., construction planner/energy efficiency expert) to prepare a Construction Equipment Efficiency Plan that identifies the specific measures and performance standards that CalAm (and its construction contractors) will implement as part of project construction and decommissioning to increase the efficient use of construction equipment and vehicles to the maximum extent feasible. Such measures shall include, but not necessarily be limited to: procedures to ensure that all construction equipment is properly tuned and maintained at all times; requirement to provide options for worker carpooling; a commitment to utilize existing electricity sources where feasible rather than portable diesel-powered generators; and identification of procedures (including the routing of haul trips) that will be followed to ensure that all materials and debris hauling is conducted in a fuel-efficient manner. The plan shall be submitted to CPUC and the Sanctuary for review and approval at least 30 days prior to the beginning of construction activities and at least 30 days prior to the beginning of decommissioning activities. Impact 4.18-3: Constrain local or regional energy supplies, require additional capacity, or affect peak and base periods of electrical demand during operations. Mitigation Measure 4.11-1	X	X	X	X	X	X	X	X	X	X	Compliance with all components of the approved Construction Equipment Efficiency Plan to ensure increased energy efficiency during construction and decommissioning.	
Impact 4.18-C: Cumulative impacts related to energy conservation. Mitigation Measures 4.10-1b and 4.18-1	X	X	X	X	X	X	X	X	X	X		See above under Mitigation Measures 4.10-1b and 4.18-1
<b>Section 4.20: Socioeconomics and Environmental Justice</b>												
Impact 4.20-1: Reductions in the rate of employment, total income, or business activity in Monterey County. Mitigation Measure 4.9-1	X	X	X	X	X	X	X	X	X	X		See above under Mitigation Measure 4.9-1
Impact 4.20-2: Disproportionately high and adverse effects on low-income or minority populations. Mitigation Measures 4.10-1a through 4.10-1e	X	X	X	X	X	X	X	X	X	X		See above under Mitigation Measures 4.10-1a through 4.10-1e
Impact 4.20-C: Cumulative impacts related to socioeconomics and environmental justice.	X	X	X	X	X	X	X	X	X	X		See above under Mitigation Measures 4.9-1 and 4.10-1a through 4.10-1e