

# **APPENDIX D**

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## **PVWMA MITIGATION COMMITMENTS**

Environmental commitments are written statements of intent made by Reclamation to monitor and mitigate for potential adverse environmental impacts associated with any phase of planning, construction, and operation and maintenance (O&M) activities. Environmental commitments are actions that:

- Restore or enhance environmental quality
- Are directly controlled by Reclamation
- Are indirectly controlled via a written agreement with another party to carry out the action – in this case, PVWMA and/or the City of Watsonville.

NEPA guidelines state that environmental commitments may be required by Reclamation and/or the project sponsor if the project is implemented. With respect to the Revised BMP Projects, PVWMA has already adopted mitigation commitments through certification of the Environmental Impact Report and adoption of Mitigation Monitoring and Report Programs (MMRP) pursuant to the California Environmental Quality Act. The mitigation commitments for the proposed project are from the MMRPs. MMRPs for the Import Water Project, Recycled Water Project and supplemental wells were adopted as conditions of project approval for the Revised Basin Management Plan EIR on February 6, 2002 (see **Tables D.1, D.2, and D.5**). The MMRP for the Integrated Coastal Distribution System was adopted a condition of project approval for the Local Projects EIR on May 19, 1999 (see **Table D.3**). Mitigation measures for biological resources for all of the Revised BMP projects are grouped in a separate table (**Table D.4**) and will be superseded and updated as the U.S. Fish and Wildlife Service, National Oceanic Atmospheric Administration Fisheries, U.S. Army Corps of Engineers, and California Department of Fish and Game establish permit conditions for the proposed action.

The mitigation commitments are organized in a table format, keyed to each significant impact and each adopted EIR mitigation measure. The mitigation measures are presented in the tables and are coded by number to the appropriate EIR (not EIS) section. The column headings in the tables are defined as follows:

- Mitigation Measure: This column contains mitigation measures to be implemented.
- Monitoring and Reporting Actions: This column contains an outline of the appropriate steps to verify compliance with the mitigation measure.
- Monitoring / Reporting Responsibility: This column contains an assignment of responsibility for the monitoring and reporting tasks.
- Monitoring / Reporting Schedule: The general schedule for conducting each monitoring and reporting task, identifying where appropriate both the timing and the frequency of the action.

**TABLE D.1  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Land Use and Planning</u></b>			
<p><b>Measure 4.B.1-1 (Recommended):</b> Implement <b>Measure 4.A.1-1.</b></p> <p><b>Measure 4.A.1-1 (Recommended):</b> Advance notification of construction activities should be provided to all property owners, residents, and businesses in the vicinity of construction areas.</p> <p>See also mitigation measures in Sections 4.A.6, Traffic and Circulation, 4.A.7, Air Quality, and 4.A.8, Noise, of this EIR.</p>	<p>1) Send notices to all property owners, residents, and businesses in the project area vicinity at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place large signs along roads in the project vicinity at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.</p>	PVWMA	Prior to project construction
<b><u>Geology and Soils</u></b>			
<p><b>Measure 4.B.2-1a:</b> For pipeline segments that traverse the Sargent Hills in the foothills of the Santa Cruz Mountains or portions of the Cayetano Hills, a design-level geotechnical report that includes a slope stability evaluation shall be completed prior to construction. Pipeline installation specifications should incorporate all slope stability recommendations contained in the geotechnical evaluation. Slope stabilization measures may include drainage, slope benching, buttresses, and vegetation restoration.</p>	<p>1) Review construction specifications to ensure that design recommendations for pipeline installation were included.</p> <p>2) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Prior to project construction
<p><b>Measure 4.B.2-1b:</b> For pipeline segments at stream crossings, a detailed hydraulic and scour analysis shall be conducted to ensure that pipelines and tunnels are installed at an adequate depth to prevent scour during flood flows. Bank erosion and channel stability should also be evaluated in the vicinity of Station 590+00 (Pajaro River and UPRR crossing). Recommendations of the hydraulic and scour analysis shall be incorporated into the project design and specifications.</p>	<p>1) Review construction specifications to ensure that design recommendations for pipeline installation were included.</p> <p>2) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Prior to project construction
		PVWMA's consulting engineering geologist	During and immediately following project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.2-2:</b> For pipeline segments that cross the San Andreas and Sargent faults, incorporate the following elements into the design and construction of the proposed pipeline:</p> <ul style="list-style-type: none"> <li>▪ Use ductile-grade steel pipe in conjunction with increased pipe wall thickness throughout the fault zones as depicted in <b>Maps A1, A2, and A3</b> in the Map Appendix. These materials are more flexible and can tolerate some deformation caused by ground failure.</li> <li>▪ Install welded joints at the joints through the fault zones.</li> <li>▪ Where possible, install pipelines across faults in a perpendicular direction.</li> <li>▪ Install water-pressure-sensitive or pipe-movement-sensitive instruments linked to the isolation valves to shut down the system in the event of failure. The isolation valves could be automatically closed during a large earthquake.</li> <li>▪ Construct a contingency route for pipe flow drainage in case of failure. Drainage of pipe flows to a culvert under the railroad track to the river or a detention basin should be considered.</li> <li>▪ Design the water conveyance system to facilitate rapid or emergency repair.</li> </ul>	<ol style="list-style-type: none"> <li>1) Review construction specifications to ensure that design recommendations listed in <b>Measure 4.B.2-2</b> are included.</li> <li>2) Monitor project construction activities to verify compliance with construction specifications. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA or PVWMA's consulting engineer</p>	<p>Prior to project construction</p> <p>During and immediately following project construction</p>

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.2-3:</b> For pipeline segments located in low-lying areas (Stations 0+00 to about 450+00 and Stations 650+00 to 1127+00) a design-level geotechnical investigation, including collection of subsurface data shall be completed prior to construction of facilities. The geotechnical evaluation should include identification of density profiles, determination of maximum shallow groundwater levels, and characterization of the vertical and lateral extent of saturated sand/silt layers that could undergo liquefaction during strong ground shaking. When facility-specific testing indicates that conditions are present that could result in liquefaction and damage to project facilities, appropriate, feasible measures should be included in the site-specific soil analysis and incorporated into the project design. These measures could include the following, unless the site-specific soils analysis dictates otherwise:</p>	<ol style="list-style-type: none"> <li>1) Review construction specifications to ensure that design recommendations for pipeline installation are included.</li> <li>2) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to project construction</p> <p>During and immediately following project construction</p>
<ul style="list-style-type: none"> <li>▪ Densification or dewatering of surface or subsurface soils.</li> <li>▪ Construction of concrete foundations to support pipelines or pile foundations to support buildings.</li> <li>▪ Removal of material that could undergo liquefaction in the event of an earthquake and replacement with stable material.</li> </ul>			
<p><b>Measure 4.B.2-4:</b> PVWMA shall develop and implement an earthquake preparedness and emergency response program. The program should be detailed and should include, at a minimum, the following elements:</p>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of an earthquake preparedness and emergency response program.</li> <li>2) Monitor project construction activities to verify earthquake preparedness and emergency response program implementation. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA or PVWMA's consulting engineer</p>	<p>Prior to project construction</p> <p>During project construction</p>
<ul style="list-style-type: none"> <li>▪ Identify specific pipeline locations, through site-specific geologic studies, that would be vulnerable to damage in an earthquake and define priorities for system repairs.</li> <li>▪ Provide appropriate PVWMA facilities staff, sheriff and fire departments with emergency response training.</li> <li>▪ Conduct practice drills, using simulated earthquake scenarios, of emergency response procedures annually.</li> </ul>			

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.2-5a:</b> A site-specific investigation shall be conducted by a geotechnical engineer to determine the presence and characteristic of potentially compressible and/or expansive soils, the depth and thickness of soil layers, and the depth to groundwater. Soils shall be sampled and laboratory tested to determine the expansion potential. The results of the investigation shall include mitigation measures that would reduce settlement to a less-than-significant level. Feasible mitigation measures could include removal and replacement of soil or deep mixing of compressible soils with stabilizing agents, as identified below:</p> <ul style="list-style-type: none"> <li>▪ Expansive soils can be excavated and replaced with non-expansive materials. The required depth of excavation should be specified by a registered civil engineer based on actual soil conditions.</li> <li>▪ Expansive soils may be treated in place by mixing them with lime. Lime-treatment alters the chemical composition of the expansive clay minerals such that the soil becomes non-expansive.</li> </ul>	<ol style="list-style-type: none"> <li>1) Review construction specifications to ensure that the geotechnical engineer's design recommendations for pipeline installation are included.</li> <li>2) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to project construction</p> <p>During project construction</p>
<p><b>Measure 4.B.2-5b:</b> Any native or imported backfill shall be selected, placed, compacted, and inspected in accordance with plans and specifications prepared by a licensed civil engineer.</p>	<ol style="list-style-type: none"> <li>1) Monitor project construction activities to verify compliance with the construction specifications. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA's consulting engineering geologist</p>	<p>During project construction</p>
<p><b>Measure 4.B.2-6a:</b> A site-specific soil corrosion survey shall be conducted by an engineer certified to evaluate soils conditions along the pipeline. The investigation shall define the need for, and the location of, insulating couplings, electrolysis test stations, and hot spot areas where there should be either galvanic or impressed current cathodic protection. This will assure a high degree of corrosion suppression to cement and uncoated steel or ductile iron pipes. All buried structures should be designed and constructed to withstand corrosive subsurface conditions.</p>	<ol style="list-style-type: none"> <li>1) Review construction specifications to ensure that design recommendations for pipeline installation were included.</li> <li>2) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA's consulting engineering geologist</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to construction</p> <p>Periodically during project construction</p>

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.2-6b:</b> To maintain and extend the life of the pipeline, bonding jumpers shall be provided at all joints to facilitate periodic corrosion testing.</p>	<p>1) Monitor project construction activities to verify compliance with the recommendations of the soils report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA's consulting engineering geologist</p>	<p>Periodically during project construction</p>
<p><b>Measure 4.B.2-7:</b> The PVWMA shall design and implement a Temporary Erosion and Sediment Control Plan for the excavation and construction phase of the project that would, at a minimum, meet the following objectives, consistent with the Final Program EIR for the Pajaro Valley Water Basin Management Plan (PVWMA, 1993):</p> <ul style="list-style-type: none"> <li>▪ The Temporary Erosion and Sediment Control Plan would be prepared by a registered civil engineer or a certified erosion and sediment control specialist using the concepts such as those developed by the Association of Bay Area Governments' Manual of Standards for Erosion and Sediment Control Measures (1995).</li> <li>▪ The Plan would be based on the specific erosion and sediment transport control needs of each pipeline segment.</li> <li>▪ The Plan would specify the means to reduce the velocity of water leaving the pipeline alignment.</li> <li>▪ The elements of the Plan would be maintained in working condition during the excavation, grading, and construction phases.</li> <li>▪ The Plan would be required, submitted, reviewed, implemented, and inspected as part of a general grading plan for the project.</li> </ul>	<p>1) Prepare contract specifications for the construction contractor that require implementation of a Temporary Erosion and Sediment Control Plan.</p> <p>2) Monitor project construction activities to verify Temporary Erosion and Sediment Control Plan implementation. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to construction</p> <p>Periodically during project construction</p>

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.2-7: (cont.)</b>			
Other erosion and sediment control measures include:			
<ul style="list-style-type: none"> <li>▪ Confine grading and excavation to the dry season (April 15 through October 15), whenever possible. If grading is scheduled for the wet season, ensure that erosion and sediment control structures are in place prior to the onset of the first major storm of the season.</li> <li>▪ Keep disturbed areas (from grading and related activities) to the minimum necessary for demolition or construction.</li> <li>▪ Direct runoff away from disturbed areas during grading and related activities.</li> <li>▪ Locate staging areas and spoil sites outside major stream and drainage ways and such that they do not drain directly into the waterways. If a spoil site drains into the creek, temporary catch basins will be constructed to intercept sediment before it reaches the channels. Spoil sites will be graded to reduce the potential for erosion.</li> <li>▪ Place sediment curtains upstream and downstream of the construction zone to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.</li> <li>▪ Prevent runoff from flowing over unprotected slopes. Place sediment traps on downhill slopes whenever construction activities such as trenching, grading, etc. occur on slopes along rivers or streams.</li> <li>▪ Following construction, creek banks will be covered with erosion control blankets and replanted with locally indigenous species using locally collected materials (seed, plugs, willow or cottonwood wattles). These will be planted according to a revegetation plan approved by the resource agencies.</li> </ul>			

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Hydrology and Water Quality</u></b>			
<b>Measure 4.B.3-2a:</b> Implement <b>Measure 4.A.3-1</b> (Storm Water Pollution Prevention Plan).		Construction contractor	Prior to construction
<p><b>Measure 4.A.3-1a:</b> The PVWMA shall require contractors to develop a SWPPP for construction of proposed facilities, as required by the RWQCB. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater discharge and to implement BMPs to reduce pollutants in stormwater discharges. The SWPPP for this proposed action would include the implementation, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> <li>▪ Source identification;</li> <li>▪ Preparation of a site map;</li> <li>▪ Description of construction materials, practices, and equipment storage and maintenance;</li> <li>▪ List of pollutants likely to contact stormwater;</li> <li>▪ Estimate of the construction site area and percent impervious area;</li> <li>▪ Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes;</li> <li>▪ Proposed construction dewatering plans and</li> <li>▪ List of provisions to eliminate or reduce discharge of materials to stormwater;</li> <li>▪ Description of waste management practices; and</li> <li>▪ Maintenance and training practices.</li> </ul>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of a Storm Water Pollution Prevention Plan.</li> <li>2) Monitor project construction activities to verify Storm Water Pollution Prevention Plan implementation. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA	Periodically during project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.3-2b:</b> Implement <b>Measure 4.A.4-1a</b> (construction within potentially jurisdictional wetlands/waters of the U.S. and streambeds).</p> <p><b>Measure 4.A.4-1a--Wetlands Avoidance:</b> Wetlands and riparian habitat at the Highway 1 crossing of the Pajaro River may be avoided entirely by using bore and jack construction.</p>	1) Prepare construction specifications that require bore and jack construction techniques be used to cross the Pajaro River.	PVWMA	Prior to project construction
	2) Monitor project construction activities to ensure that the bore and jack construction is used at the Pajaro River crossing. If non-compliance is noted, notify the contractor of required actions and the deadline for compliance.	PVWMA or PVWMA's consulting engineer	During project construction
<p><b>Measure 4.B.3-3:</b> Obtain a National Pollutant Elimination Discharge System (NPDES) permit for construction dewatering and implement conditions of the permit. An NPDES permit will be required from the RWQCB for all discharges for construction dewatering. Discharges must meet all applicable water quality objectives. The RWQCB may require certain conditions of the permit, such as treatment of the flows prior to discharge.</p>	1) Prepare and submit an application for an NPDES permit to the RWQCB.	PVWMA	Prior to project construction
	2) Monitor construction activities to verify compliance with BMP water quality objectives and any conditions of the NPDES permit. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction
<p><b>Measure 4.B.3-4a:</b> Implement measures to ensure that construction activities do not damage existing wells. Wells shall be capped in an appropriate manner to prevent soil and other contaminants from entering groundwater aquifers.</p>	1) Review construction plans and maps to ensure that the wells are identified.	PVWMA	Prior to project construction
	2) Monitor construction activities to verify that wells in and near the project area are avoided. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction
<p><b>Measure 4.B.3-4b:</b> PVWMA or its contractor shall correct any damage to wells and/or reimburse well owners for any loss of use of the well during construction.</p>	1) Inspect wells in the construction area prior to, and immediately following, project construction. Document any damage to wells resulting from construction activities. Repair any damage to the wells.	PVWMA	Prior to and immediately following construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.3-4b: (cont.)</b>	2) If access to existing wells in the construction area will be affected, notify well operators in writing of the loss of use of the well and the dates during which access to the well(s) will not be available. Reimburse well operators for loss of well use based on historical water use.	Construction contractor and PVWMA	Prior to and immediately following construction
<b><u>Vegetation and Wildlife</u></b>			
See Table 4.			
<b><u>Cultural Resources</u></b>			
<b>Measure 4.B.5-1a:</b> Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified cultural resource sites. A qualified cultural resource specialist shall be retained to assist in identifying the extent of important cultural resource sites to be avoided, which may include the preparation of detailed cultural resource evaluation reports and consultation with local, state, and federal agencies as well as the local Native American community and the Native American Heritage Commission.	1) Determine the areal extent of important cultural resources sites within the project area. Review project plans to verify that project facilities would not be located within these sites.	PVWMA's consulting archaeologist	Prior to final engineering design
<b>Measure 4.B.5-1b:</b> If important cultural resource sites cannot be avoided, PVWMA will coordinate with local, state, and federal agencies in the development of an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include documentation and recordation of the resource, relocation, or stabilization of the resource.	1) Prepare contract specifications for the construction contractor that require implementation of the cultural resources mitigation plan developed under the Programmatic Agreement.  2) Monitor construction activities to ensure that the cultural resources mitigation plan is implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA's consulting archaeologist	Prior to requesting construction bids
		PVWMA's consulting archaeologist	During project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.5-2: Implement Measure 4.A.5-1.</b>			
<p><b>Measure 4.A.5-1:</b> Should any as yet undiscovered cultural resources, such as structural features, or unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work will be suspended and PVWMA staff will be contacted. A qualified cultural resource specialist shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	1) Prepare a resource recovery plan for the site including findings and recommendations and submit it to PVWMA, the U.S. Army Corps of Engineers, the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the project file.	PVWMA's consulting archaeologist	During project construction, if potential resources are encountered
	2) Submit a document verifying that evaluation of the materials and their recovery occurred. Prepare a report of findings and submit it to PVWMA, the State Historic Preservation Officer, the Advisory Council on Historic preservation and the project file.	PVWMA's consulting archaeologist	During project construction, if potential resources are encountered
<p><b>Measure 4.B.5-3a:</b> The resource boundaries should be marked as exclusion zones both on the ground and on construction maps.</p>	1) Review construction maps and monitor construction sites to ensure that resource boundaries are marked as exclusion zones.	PVWMA's consulting archaeologist	Prior to, and during, project construction
<p><b>Measure 4.B.5-3b:</b> Construction supervisory personnel should be notified of the existence of these resources and be required to keep personnel and equipment away from these areas. During construction and operations, personnel and equipment will be restricted to the surveyed corridor.</p>	1) Prepare contract specifications for the construction contractor that require all construction personnel and equipment remain within the surveyed corridor.	PVWMA	Prior to requesting construction bids
<p><b>Measure 4.B.5-3c:</b> Monthly monitoring of the cultural resources to be avoided should be completed to insure that no inadvertent damage to the resources occurs as a result of construction or construction-related activities. If damage is detected a guard will be posted to patrol the site and adjacent important resources (such as gravestones and churches).</p>	1) Monitor cultural resources to be avoided on a monthly basis during project construction to verify that no damage occurs.	PVWMA's consulting archaeologist	Monthly during project construction
	2) If damage to a cultural resource is detected, hire a guard to patrol the site and adjacent important resources.	PVWMA	During project construction, if damage is detected

**TABLE D.1 (Continued)**  
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MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Traffic and Circulation</u></b>			
<p><b>Measure 4.B.6-1 (Recommended):</b> Implement <b>Measures 4.A.6-1a</b> and 4.A.6-1b.</p> <p><b>Measure 4.A.6-1a (Recommended):</b> Schedule truck trips outside of peak commute hours.</p> <p><b>Measure 4.A.6-1b (Recommended):</b> Use haul routes that minimize truck traffic on local roadways to the extent possible.</p>	<p>1) Prepare contract specifications for the construction contractor that require construction truck trips be scheduled during off-peak hours and that haul routes be selected to minimize truck traffic on local roadways.</p>	PVWMA	Prior to requesting construction bids
<p><b>Measure 4.B.6-2a:</b> Limit construction hours to off-peak traffic periods on commute streets.</p>	<p>1) Prepare contract specifications for the construction contractor that limit construction hours to off-peak traffic periods.</p>	PVWMA	Prior to requesting construction bids
<p><b>Measure 4.B.6-2b:</b> The contractor shall be required to prepare traffic control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plan shall be reviewed for appropriateness, and approved by Caltrans and the governing Public Works Departments.</p>	<p>1) Prepare contract specifications for the construction contractor that require preparation of a traffic control plan.</p> <p>2) Review the proposed traffic control plan to ensure that measures to maintain traffic flows are included. Notify the construction contractor if any modifications are required.</p>	PVWMA	Prior to requesting construction bids
<p><b>Measure 4.B.6-3a:</b> To minimize disruption of emergency vehicle access and maintain access to driveways to adjacent land uses, PVWMA would require the contractors to maintain steel trench plates at the construction sites to restore access across open trenches. Construction trenches shall not be left open after work hours.</p>	<p>1) Monitor construction activities to ensure that steel trench plates are placed on construction trenches along driveways. If non-compliance is noted, notify construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Periodically during project construction
<p><b>Measure 4.B.6-3b:</b> To minimize disruption of emergency vehicle access, affected jurisdictions will be asked to identify detours to be posted by contractor.</p>	<p>1) Place a large sign along roadways in the project vicinity at least one week in advance of construction.</p>	PVWMA	Prior to project construction

**TABLE D.1 (Continued)**  
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MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.6-3c:</b> The contractor will notify the appropriate police, fire, and emergency services of the timing, location, and duration of construction activities and the locations of detours and lane closures prior to beginning construction in the immediate vicinity of affected roadways.	1) Send notices to police, fire, and emergency service providers at least one week in advance of construction.	PVWMA	Prior to project construction
<b>Measure 4.B.6-4:</b> Implement <b>Measure 4.A.6-2</b> .	1) Prepare contract specifications for the construction contractor that require that a preconstruction survey of key routes to the project site be conducted, and that roads damaged by construction be repaired.	PVWMA	Prior to project construction
<b>Measure 4.A.6-2:</b> Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity.	2) Inspect access roads to the project site to ensure that roads are repaired following project construction, if necessary. If roads are not repaired, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Following project construction
<b>Measure 4.B.6-5:</b> Implement <b>Measures 4.A.6-3a</b> and <b>4.A.6-3b</b> .	1) Implement the Monitoring and Reporting Action for <b>Measure 4.B.6-2b</b> , above.	See above	See above
<b>Measure 4.A.6-3a:</b> The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plans prepared by the contractor shall include recommended detours for bicyclists. The traffic control plan shall be reviewed for appropriateness, and approved by the governing Public Works Department.			
<b>Measure 4.A.6-3b:</b> The contractor shall provide advanced public notification of construction activity and roadway/access closures.	1) Implement the Monitoring and Reporting Action for <b>Measure 4.B.1-1</b> , above.	See above	See above

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Air Quality</u></b>			
<b>Measure 4.B.7-1a:</b> Implement dust control program described in <b>Measure 4.A.7-1</b> to minimize potential public health impacts associated with exposure to contaminated soil dust.	1) Prepare contract specifications for the construction contractor that require implementation of a dust control program.	PVWMA	Prior to requesting construction bids
<p><b>Measure 4.A.7-1:</b> The construction contractor shall implement a dust control program that includes the following elements:</p> <ul style="list-style-type: none"> <li>▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.</li> <li>▪ Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.</li> <li>▪ Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites.</li> <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 binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower.</li> <li>▪ Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).</li> <li>▪ Limit traffic on unpaved roads to 15 mph.</li> <li>▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</li> <li>▪ Replant vegetation in disturbed areas as quickly as possible.</li> </ul>	2) Monitor construction activities to verify that the measures of the dust control program are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.7-1b: <u>Response Plan</u>.</b> Prepare a project-specific Response Plan that includes a project-specific contingency plan for hazardous materials and waste operations and submit the plan to the agency with jurisdiction before site activities could proceed. The Response Plan, applicable to all excavation activities, shall establish policies and procedures to protect workers and the public from potential hazards posed by hazardous wastes. The plan shall be prepared according to federal and California OSHA regulations. The plan shall also provide for proper storage and/or disposal of any contaminated soils that meet the definition of a hazardous waste. Such a protocol could include off-site treatment of contaminated materials or disposal at an appropriate landfill.</p>	1) Prepare contract specifications for the construction contractor that require implementation of a Response Plan for hazardous materials and waste operations.	PVWMA	Prior to construction
	2) Monitor project construction activities to verify Response Plan implementation. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	During project construction
<p><b>Measure 4.B.7-1c: <u>Reduction of Excavation Impacts</u>.</b> The contractor shall monitor for odors and analyze excavated material with a photoionization detector to determine the potential for soil contamination and the need for specialized soil-handling procedures to reduce excavation impacts in areas of suspected contamination.</p>	1) Prepare contract specifications for the construction contractor that require use of a photoionization detector to determine the potential for soil contamination.	Construction contractor	Prior to construction
	2) Monitor project construction activities to determine the potential for soil contamination. If soil contamination is detected, notify PVWMA immediately and remove contaminated soils using appropriate procedures.	Construction contractor	During project construction
<p><b>Measure 4.B.7-1d: <u>Disposal Characterization</u>.</b> Within high-risk areas identified in Table 4.B.7-1, excavations shall be observed by a trained health and safety professional equipped with an organic vapor analyzer to screen excavated materials and ensure worker safety. If contamination is encountered, excavated soils shall be segregated and sampled relative to the profiling requirements of the accepting landfill.</p>	1) Monitor construction activities in high-risk areas to ensure worker safety and screen excavated materials.	PVWMA's consulting health and safety professional	During project construction
	2) If contamination is encountered, conduct soil sampling and submit soil testing results to PVWMA and the accepting landfill.	PVWMA's consulting health and safety professional	During project construction, if necessary

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.7-1e:</b> <u>Groundwater and Soil Testing.</u> Conduct groundwater and soil testing for hazardous materials at identified potentially contaminated sites prior to pipeline construction. Treatment would be applied, in consultation with the Regional Water Quality Control Board, Department of Toxic Substances Control, and/or other regulatory agencies, to ensure that all discharges meet applicable regulations.</p>	<p>1) Conduct soil and groundwater testing and submit results to PVWMA and appropriate regulatory agencies. If hazardous materials are encountered, implement treatment measures in consultation with the regulatory agencies.</p>	<p>PVWMA's consulting hazardous materials specialist and PVWMA</p>	<p>Prior to construction</p>
<p><b>Measure 4.B.7-1f:</b> <u>Hazardous Materials Management/Spill Prevention Plan.</u> A Hazardous Materials Management/Spill Prevention Plan shall be developed and given to all contractors working on the project. At least one copy shall be on-site with the construction manager at all times. The purpose of the plan is to provide on-site construction managers, environmental compliance monitors, and regulatory agencies with a detailed description of hazardous materials management, spill prevention, and spill response/cleanup measures associated with the construction of project elements. The primary objective of the plan is to prevent the spill of hazardous materials. Elements of the plan shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>▪ A discussion of hazardous materials management, including delineation of hazardous material and hazardous waste storage areas, access and egress routes, waterways, emergency assemble areas, temporary hazardous waste storage areas;</li> <li>▪ Spill control and countermeasures, including employee spill prevention/response training; and</li> <li>▪ Notification and documentation procedures.</li> </ul>	<p>1) Prepare contract specifications for the construction contractor that require implementation of a Hazardous Materials Management/Spill Prevention Plan.</p> <p>2) Monitor project construction activities to verify implementation of the Hazardous Materials Management/Spill Prevention Plan. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to construction</p> <p>During project construction</p>

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<u>Noise</u>			
<b>Measure 4.B.8-1:</b> Implement <b>Measure 4.A.8-1</b> .	1) Prepare contract specifications for the construction contractor that require implementation of noise mitigation measures listed in <b>Measure 4.A.8-1</b> .	PVWMA	Prior to requesting construction bids
<b>Measure 4.A.8-1:</b> PVWMA shall incorporate into contract specifications the following measures:	2) Monitor construction activities to verify that the measures of the noise control measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction
<ul style="list-style-type: none"> <li>▪ Comply with all local sound control and noise level rules, regulations, and ordinances.</li> <li>▪ Equipment and trucks used for project construction shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.</li> </ul>			
<p>Impact equipment (e.g., 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. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dbA. Quieter procedures shall be used (such as drilling rather than impact equipment) whenever feasible.</p>			
<ul style="list-style-type: none"> <li>▪ Stationary noise sources shall be located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.</li> <li>▪ Temporary walls may be erected at some locations to reduce noise impacts to residences adjacent to construction sites.</li> </ul>			

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Public Services</b>			
<b>Measure 4.B.9-1a:</b> A detailed study identifying utilities along the proposed alignment will be prepared during the pre-design stages of the project.	1) Conduct a detailed study of utilities along the project alignment and submit a report documenting the results of the study to PVWMA.	PVWMA's consulting engineer	Prior to final engineering design
<b>Measure 4.B.9-1b:</b> The following measures are required for segments identified in final design as having potential conflict with significant utilities:	1) Prepare contract specifications for the construction contractor that include measures listed in <b>Measure 4.B.9-1b</b> .	PVWMA	Prior to final engineering design
<ul style="list-style-type: none"> <li>▪ Utility excavation and encroachment permits would be required from the appropriate agencies, including the Public Works Departments of San Benito, Santa Clara, Santa Cruz and Monterey Counties, Pacific Bell, U.S. Sprint, PG&amp;E, City of Watsonville, and UPRR. These permits include measures to minimize utility disruption. PVWMA and its contractors would comply with permit conditions. Permit requirements would be included in construction contract specifications.</li> <li>▪ Utility locations would be verified through field survey (potholing) and use of an underground locating service.</li> <li>▪ A detailed engineering and construction plan would be prepared as part of the design plans and specifications. This plan should include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services would be notified of PVWMA's construction plans and schedule. Arrangements would be made with these entities regarding protection, relocation, or temporary disconnection of services.</li> <li>▪ In areas where the pipeline would parallel wastewater mains, engineering and construction plans will include trench wall support measures to guard against trench wall failure and possible resulting loss of structural support for the wastewater main.</li> <li>▪ Residents and businesses in the project area would be notified by the contractor in writing of planned utility service disruption two to four days in advance in conformance with County and State standards.</li> </ul>	2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.9-2:</b> Implement <b>Measures 4.B.6-3a</b> through <b>4.B.6-3c</b> in Section 4.B.6, Traffic and Circulation.	1) Implement the Monitoring and Reporting Actions for <b>Measures 4.B.6-3a</b> through <b>4.B.6-3c</b> , above.		
<b>Measure 4.B.9-3 (Recommended):</b> Implement <b>Measures 4.B.6-2a</b> and <b>4.B.6-2b</b> in Section 4.B.6, Traffic and Circulation.	1) Implement the Monitoring and Reporting Actions for <b>Measures 4.B.6-2a</b> and <b>4.B.6-2b</b> , above.		
<b><u>Visual/Aesthetic and Recreational Resources</u></b>			
<b>Measure 4.A.10-1a:</b> The PVWMA shall revegetate disturbed natural areas to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area.	1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas.	PVWMA	Prior to requesting construction bids
	2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA or PVWMA's consulting biologist	Following project construction
<b>Measure 4.A.10-1b:</b> The PVWMA shall use design elements to enhance visual integration of the proposed above-ground facilities with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain.	1) Review project plans to ensure that they include design elements such as low-glare earth-tone paint to visually integrated the proposed facilities with their surroundings.	PVWMA	Prior to final engineering design
<b>Measure 4.A.10-1c:</b> The PVWMA shall ensure that its contractors restore disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.	1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas along the pipeline alignment.	PVWMA	Prior to requesting construction bids
	2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Following project construction

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.B.10-2 (Recommended):</b> Implement <b>Measure 4.A.10-2</b>.</p> <p><b>Measure 4.A.10-2 (Recommended):</b> The PVWMA shall ensure that all exterior lighting if used is directed downward and oriented to insure that no light source is directly visible from neighboring residential areas. If necessary, landscaping shall be provided around proposed facilities. This vegetation shall be selected, placed, and maintained to minimize off-site light and glare onto surrounding areas. In addition, highly reflective building materials and/or finishes shall not be used in the designs for proposed structures.</p>	1) Prepare contract specifications for the construction contractor that include exterior lighting mitigation listed in <b>Measure 4.A.10-2</b> .	PVWMA	Prior to requesting construction bids
	2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	During and following construction
<p><b>Measure 4.C-1: CEQA Compliance.</b> Delivery of CVP water for use in areas beyond the 30,200 acres of agricultural lands shown in <b>Figure 4.C-2</b> shall be permitted only in accordance with the terms for delivery to Contractor's Service Area pursuant to any contract for the delivery of CVP water between Reclamation and PVWMA, and in accordance with any and all laws, including CEQA and NEPA. The appropriate local land use agency will be the lead agency for preparation of an environmental document for any proposed land use changes; PVWMA will be the lead agency for any actions specific to water system improvements or other PVWMA actions needed to provide CVP water to areas beyond those shown in <b>Figure 4.C-2</b>.</p>	1) Complete CEQA documentation for any water system improvements to serve areas beyond the 30,200 acres.	PVWMA	Prior to delivering CVP water beyond the 30,200 acres
<p><b>Measure 4.C-2: Endangered Species Act Compliance.</b> PVWMA will not deliver water for the purpose of converting any native lands to agriculture uses unless and until the project sponsor has complied with the Endangered Species Act and has determined that such conversion will not likely affect listed species or that appropriate mitigation has been provided. PVWMA intends to provide CVP water to existing irrigated agricultural lands. PVWMA currently is not proposing to provide any CVP water for M&amp;I purposes, nor is it proposing to provide CVP water outside of the approximately 30,200 acres of agricultural lands shown in <b>Figure 4.C-2</b>. If PVWMA is the lead agency for development of water system improvements and construction or operation of those improvements or any other PVWMA actions that could adversely affect threatened or endangered species, PVWMA will consult with the appropriate resource agency (California</p>	1) Obtain proof of compliance with the Endangered Species Act prior to providing water to areas beyond the 30,200 acres.	PVWMA	Prior to delivering CVP water beyond the 30,200 acres
	2) Comply with the Endangered Species Act for any water system improvements needed to serve areas beyond the 30,200 acres.	PVWMA	Prior to delivering CVP water beyond the 30,200 acres

**TABLE D.1 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE IMPORT WATER PROJECT**

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MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
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Department of Fish and Game, US Fish and Wildlife Service, and/or National Marine Fisheries Service) pursuant to all applicable laws, including CEQA and NEPA. PVWMA will implement project-specific mitigation measures and permit conditions as appropriate.

**TABLE D.2**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Land Use and Planning</u></b>			
<p><b>Measure 4.A.1-1 (Recommended):</b> Advance notification of construction activities should be provided to all property owners, residents, and businesses in the vicinity of construction areas.</p> <p>See also mitigation measures in Sections 4.A.6, Traffic and Circulation, 4.A.7, Air Quality, and 4.A.8, Noise, of this EIR.</p>	<p>1) Send notices to all property owners residents, and businesses in the project area vicinity at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place large signs along roads in the project vicinity at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.</p>	PVWMA	Prior to project construction
<p><b>Measure 4.A.1-2:</b> In order to compensate for the loss of prime agricultural land, PVWMA will cause up to 8.5 acres of prime agricultural land that is no longer farmed to be restored or otherwise brought back into production. This can be accomplished through contribution to a fund dedicated to the restoration of agricultural land.</p>	<p>1) Identify 8.5 acres of prime agricultural land that is no longer farmed and return it to production, or alternatively, contribute to a fund dedicated to the restoration of agricultural land. Submit documentation of agricultural land restoration or appropriate contribution to the project file and the Santa Cruz County Planning Department.</p>	PVWMA	
<b><u>Geology and Soils</u></b>			
<p><b>Measure 4.A.2-1a:</b> Implement <b>Measures 5.A.2-3a</b> through <b>5.A.2-3f</b>.</p> <p><b>Measure 5.A.2-3a:</b> All grading and construction will conform to requirements of the Monterey and Santa Cruz Counties Grading Ordinances.</p> <p><b>Measure 5.A.2-3b:</b> Site grading and construction work areas will expose as little new ground surface as possible. Vegetation cover should be left intact to the extent practical.</p>	<p>1) Review construction specifications to ensure that design recommendations for RWF construction and pipeline installation listed in <b>Measures 5.A.2-3a</b> through <b>5.A.2-3f</b> are included.</p> <p>2) Monitor project construction activities to verify compliance with the construction specifications. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Prior to project construction
		PVWMA's consulting engineering geologist	During and immediately following project construction

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 5.A.2-3c:</b> To the extent possible, grading activities in noncropped areas will be limited to the period between April 15 and October 15. If dry conditions persist after October 15, one-week extensions of grading activities will be obtained from the County Public Works Department. In areas where the soil is tilled, grading activities will be coordinated with the local farmers to ensure consistency between their erosion control and farming practices and construction disturbance.</p>			
<p><b>Measure 5.A.2-3d:</b> Implement best construction practices at all grading sites, regardless of soil erodibility hazard.</p>			
<p><b>Measure 5.A.2-3e:</b> Upon completion of construction at all sites, loose soils shall be removed or spread and all areas shall be re-soiled and reseeded to ensure that a stable soil cover will remain.</p>			
<p><b>Measure 5.A.2-3f:</b> PVWMA will prepare and implement an inspection and maintenance program for the right-of-way and all facility sites. The plan will include routine inspection plans and reporting, and prescriptive methods for correcting erosion or soil instability problems.</p>			

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.2-1b: Implement Measure 5.A.2-2.</b>			
<p><b>Measure 5.A.2-2:</b> All diversion and pipeline facilities will comply with applicable policies and appropriate engineering investigation practices necessary to reduce the potential detrimental effects of expansive soils, and corrosivity. Appropriate geotechnical studies will be conducted using generally accepted and appropriate engineering techniques for determining the susceptibility of the sites to unstable, weak or corrosive soils. A licensed geotechnical engineer will prepare recommendations applicable to foundation design, earthwork, and site preparation prior to or during the project design phase. Recommendations will address mitigation of site-specific, adverse soil and bedrock conditions that could hinder development. Project engineers will implement the recommendations. Geotechnical design and design criteria will comply with applicable codes and requirements of the 1994 or 1997 UBC with California additions (CCR Title 24), applicable City construction and grading ordinances.</p>	<ol style="list-style-type: none"> <li>1) Include geotechnical report with recommendations as an appendix to construction specifications.</li> <li>2) Review construction specifications to ensure that design recommendations were included.</li> <li>3) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to requesting construction bids</p> <p>Prior to project construction</p> <p>During and immediately following project construction</p>
<p><b>Measure 4.A.2-2:</b> Conduct geologic investigations of all project facilities and pipeline alignments prior to the final design, and implement design recommendations. The investigations will specify hazards related to ground movements and co-seismic effects, especially liquefaction. The recommendations of an engineering geologist will be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager will conduct inspections and certify that all design criteria have been met. While these measures would not eliminate the potential for damage to the facilities, they would ensure that the hazards have been reduced to an acceptable level of risk and, therefore, the impact would be reduced to a less-than-significant level.</p>	<ol style="list-style-type: none"> <li>1) Review construction specifications to ensure that the engineering geologist's design recommendations for RWF construction and pipeline installation are included.</li> <li>2) Monitor project construction activities to verify compliance with the recommendations of the engineering geologist. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to project construction</p> <p>During and immediately following project construction</p>

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Hydrology and Water Quality</u></b>			
<p><b>Measure 4.A.3-1a:</b> The PVWMA shall require contractors to develop a SWPPP for construction of proposed facilities, as required by the RWQCB. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater discharge and to implement BMPs to reduce pollutants in stormwater discharges. The SWPPP for this proposed action would include the implementation, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> <li>▪ Source identification;</li> <li>▪ Preparation of a site map;</li> <li>▪ Description of construction materials, practices, and equipment storage and maintenance;</li> <li>▪ List of pollutants likely to contact stormwater;</li> <li>▪ Estimate of the construction site area and percent impervious area;</li> <li>▪ Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes;</li> <li>▪ Proposed construction dewatering plans and</li> <li>▪ List of provisions to eliminate or reduce discharge of materials to stormwater;</li> <li>▪ Description of waste management practices; and</li> <li>▪ Maintenance and training practices.</li> </ul>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require preparation and implementation of a Storm Water Pollution Prevention Plan.</li> <li>2) Monitor project construction activities to verify Temporary Erosion and Sediment Control Plan implementation. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to construction</p> <p>Periodically during project construction</p>
<p><b>Measure 4.A.3-1b:</b> Refer to <b>Measure 4.A.4-1a</b> in Section 4.A.4, Vegetation and Wildlife, regarding pipeline construction within potentially jurisdictional wetlands/waters of the U.S. and streambeds and at the Pajaro River.</p>	<ol style="list-style-type: none"> <li>1) Implement Monitoring and Reporting Actions for <b>Measure 4.A.4-1a</b>, below.</li> </ol>		

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.3-2a:</b> Above-ground irrigation systems shall be operated in accordance with the requirements of Title 22 of the California Code of Regulations and any reclamation permits issued by the RWQCB, Central Coast Region. Title 22 requires that irrigation rates match the evapotranspiration rates of the plants or crops being irrigated, and that application of reclaimed water be prohibited within 50 feet of any domestic water supply or wells.	1) Prepare and submit an application for an NPDES permit to the RWQCB.  2) Monitor operation of irrigation systems to verify compliance with applicable regulations and permits. If non-compliance is noted, notify the operator of required actions and the deadline for compliance.	PVWMA	Prior to project construction
<b>Measure 4.A.3-2b:</b> Monitoring of crop productivity should be performed, and if adverse impacts to the yields of sensitive crops (e.g., strawberries) occurs, the blending ratio should be adjusted to decrease the fraction of recycled water in the applied irrigation water.	1) Monitor crop productivity and submit documentation of crop yields to the project file. Adjust blending ratios if necessary.	PVWMA	Periodically following project implementation
<b>Measure 4.A.3-3:</b> The facilities shall be designed to comply with FEMA and County of Santa Cruz requirements to floodproof the facilities and not increase upstream or downstream flood hazards.	1) Review project plans to ensure they comply with FEMA and County of Santa Cruz requirements concerning floodproofing. If non-compliance is noted, revise plans as necessary.  2) Monitor project construction activities to verify compliance with FEMA and County of Santa Cruz requirements. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA or PVWMA's consulting engineer	Prior to final engineering design
<b>Measure 4.A.3-4a:</b> Implement measures to ensure that construction activities do not damage existing wells. Wells shall be capped in an appropriate manner to prevent soil and other contaminants from entering groundwater aquifers.	1) Review construction plans and maps to ensure that the wells are identified.  2) Monitor construction activities to verify that wells in and near the project area are avoided. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Prior to project construction
		PVWMA	Periodically during project construction

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.3-4b:</b> PVWMA or its contractor shall correct any damage to wells and/or reimburse well owners for any loss of use of the well during construction.	<ol style="list-style-type: none"> <li>1) Inspect wells in the construction area prior to, and immediately following, project construction. Document any damage to wells resulting from construction activities. Repair any damage to the wells.</li> <li>2) If access to existing wells in the construction area will be affected, notify well operators in writing of the loss of use of the well and the dates during which access to the well(s) will not be available. Reimburse well operators for loss of well use based on historical water use.</li> </ol>	<p>PVWMA</p> <p>Construction contractor and PVWMA</p>	<p>Prior to and immediately following construction</p> <p>Prior to and immediately following construction</p>
<b><u>Vegetation and Wildlife</u></b>			
See Table 4.			
<b><u>Cultural Resources</u></b>			
<b>Measure 4.A.5-1:</b> Should any as yet undiscovered cultural resources, such as structural features, or unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work will be suspended and PVWMA staff will be contacted. A qualified cultural resource specialist shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.	<ol style="list-style-type: none"> <li>1) Prepare a resource recovery plan for the site including findings and recommendations and submit it to PVWMA, the U.S. Army Corps of Engineers, the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the project file.</li> <li>2) Submit a document verifying that evaluation of the materials and their recovery occurred. Prepare a report of findings and submit it to PVWMA, the State Historic Preservation Officer, the Advisory Council on Historic preservation and the project file.</li> </ol>	<p>PVWMA's consulting archaeologist</p> <p>PVWMA's consulting archaeologist</p>	<p>During project construction, if potential resources are encountered</p> <p>During project construction, if potential resources are encountered</p>

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.A.5-2:</b> As part of the siting study for wells, PVWMA will retain an archaeologist to conduct archival research and surface reconnaissance of potential sites. The findings of the investigations will be incorporated into the selection of specific locations for wells and connecting pipelines such that PVWMA will avoid siting wells and attendant connecting pipelines at or through any significant cultural resources.</p>	<p>1) Determine the areal extent of important cultural resources sites within the project area. Review project plans to verify that project facilities would not be located within these sites.</p>	<p>PVWMA's consulting archaeologist</p>	<p>Prior to final engineering design</p>
<p><b><u>Traffic and Circulation</u></b></p>			
<p><b>Measure 4.A.6-1a (Recommended):</b> Schedule truck trips outside of peak commute hours.</p>	<p>1) Prepare contract specifications for the construction contractor that require construction truck trips be scheduled during off-peak hours and that haul routes be selected to minimize truck traffic on local roadways.</p>	<p>PVWMA</p>	<p>Prior to requesting construction bids</p>
<p><b>Measure 4.A.6-1b (Recommended):</b> Use haul routes that minimize truck traffic on local roadways to the extent possible.</p>	<p>1) Prepare contract specifications for the construction contractor that require that a preconstruction survey of key routes to the project site be conducted, and that roads damaged by construction be repaired.</p>	<p>PVWMA</p>	<p>Prior to project construction</p>
<p><b>Measure 4.A.6-2:</b> Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity.</p>	<p>2) Inspect access roads to the project site to ensure that roads are repaired following project construction, if necessary. If roads are not repaired, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA</p>	<p>Following project construction</p>
<p><b>Measure 4.A.6-3a:</b> The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plans prepared by the contractor shall include recommended detours for bicyclists. The traffic control plan shall be reviewed for appropriateness, and approved by the governing Public Works Department.</p>	<p>1) Prepare contract specifications for the construction contractor that require preparation of a traffic control plan.</p> <p>2) Review the proposed traffic control plan to ensure that measures to maintain traffic flows are included. Notify the construction contractor if any modifications are required.</p>	<p>PVWMA</p>	<p>Prior to requesting construction bids</p>
		<p>PVWMA, Caltrans, Santa Cruz County Public Works Department</p>	<p>Prior to project construction</p>

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.6-3b:</b> The contractor shall provide advanced public notification of construction activity and roadway/access closures.	1) Implement the Monitoring and Reporting Action for <b>Measure 4.A.1-1</b> , above.		
<b><u>Air Quality</u></b>			
<b>Measure 4.A.7-1:</b> The construction contractor shall implement a dust control program that includes the following elements:	1) Prepare contract specifications for the construction contractor that require implementation of a dust control program.	PVWMA	Prior to requesting construction bids
<ul style="list-style-type: none"> <li>▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.</li> <li>▪ Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.</li> <li>▪ Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites.</li> <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 binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower.</li> <li>▪ Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).</li> <li>▪ Limit traffic on unpaved roads to 15 mph.</li> <li>▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</li> <li>▪ Replant vegetation in disturbed areas as quickly as possible.</li> </ul>	2) Monitor construction activities to verify that the measures of the dust control program are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Noise</b>			
<p><b>Measure 4.A.8-1:</b> PVWMA shall incorporate into contract specifications the following measures:</p> <ul style="list-style-type: none"> <li>▪ Comply with all local sound control and noise level rules, regulations, and ordinances.</li> <li>▪ Equipment and trucks used for project construction shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.</li> <li>▪ Impact equipment (e.g., 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. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used (such as drilling rather than impact equipment) whenever feasible.</li> <li>▪ Stationary noise sources shall be located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.</li> <li>▪ Temporary walls may be erected at some locations to reduce noise impacts to residences adjacent to construction sites.</li> </ul>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of noise mitigation measures listed in <b>Measure 4.A.8-1</b>.</li> <li>2) Monitor construction activities to verify that the measures of the noise control measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to requesting construction bids</p> <p>Periodically during project construction</p>

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.A.8-2:</b> PVWMA shall incorporate into contract specifications the following measures:</p>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that include measures listed in <b>Measure 4.A.8-2.</b></li> <li>2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA	Prior to final engineering design
<ul style="list-style-type: none"> <li>▪ The pumping facilities shall be designed with acoustical treatments (building enclosures, louvered vents, noise walls, etc.) that are adequate to maintain potential noise generation to levels at or below ambient levels.</li> <li>▪ The blending facilities shall be built with enclosures that provide maximum feasible noise attenuation, to ensure that sensitive receptors would not be affected.</li> </ul>		PVWMA	Periodically during project construction
<b><u>Public Services</u></b>			
<p><b>Measure 4.A.9-1:</b> A detailed study identifying utilities along the proposed alignment will be prepared during the pre-design stages of the project.</p>	<ol style="list-style-type: none"> <li>1) Conduct a detailed study of utilities along the project alignment and submit a report documenting the results of the study to PVWMA.</li> </ol>	PVWMA's consulting engineer	Prior to final engineering design
<p>The following measures are required for segments identified in final design as having potential conflict with significant utilities:</p>	<ol style="list-style-type: none"> <li>2) Prepare contract specifications for the construction contractor that include measures listed in <b>Measure 4.A.9-1.</b></li> <li>3) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA	Prior to final engineering design
<ul style="list-style-type: none"> <li>▪ Utility excavation and encroachment permits would be required from the appropriate agencies, including the Public Works Departments of San Benito, Santa Clara, Santa Cruz and Monterey Counties, Pacific Bell, U.S. Sprint, PG&amp;E, City of Watsonville, and UPRR. These permits include measures to minimize utility disruption. PVWMA and its contractors would comply with permit conditions. Permit requirements would be included in construction contract specifications.</li> </ul>		PVWMA	Periodically during project construction
<ul style="list-style-type: none"> <li>▪ Utility locations would be verified through field survey (potholing) and use of an underground locating service.</li> </ul>			

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.9-1: (cont.)</b>			
<ul style="list-style-type: none"> <li>▪ A detailed engineering and construction plan would be prepared as part of the design plans and specifications. This plan should include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services would be notified of PVWMA's construction plans and schedule. Arrangements would be made with these entities regarding protection, relocation, or temporary disconnection of services.</li> <li>▪ In areas where the pipeline would parallel wastewater mains, engineering and construction plans will include trench wall support measures to guard against trench wall failure and possible resulting loss of structural support for the wastewater main.</li> <li>▪ Residents and businesses in the project area would be notified by the contractor in writing of planned utility service disruption two to four days in advance in conformance with County and State standards.</li> </ul>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas.</li> <li>2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA or PVWMA's consulting biologist</p>	<p>Prior to requesting construction bids</p> <p>Following project construction</p>
<b><u>Visual/Aesthetic and Recreational Resources</u></b>			
<p><b>Measure 4.A.10-1a:</b> The PVWMA shall revegetate disturbed natural areas to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area.</p>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas.</li> <li>2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA or PVWMA's consulting biologist</p>	<p>Prior to requesting construction bids</p> <p>Following project construction</p>

**TABLE D.2 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE RECYCLED WATER PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 4.A.10-1b:</b> The PVWMA shall use design elements to enhance visual integration of the proposed above-ground facilities with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain.</p>	<p>1) Review project plans to ensure that they include design elements such as low-glare earth-tone paint to visually integrated the proposed facilities with their surroundings.</p>	PVWMA	Prior to final engineering design
<p><b>Measure 4.A.10-1c:</b> The PVWMA shall ensure that its contractors restore disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.</p>	<p>1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas along the pipeline alignment.</p>	PVWMA	Prior to requesting construction bids
	<p>2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Following project construction
<p><b>Mitigation Measure 4.A.10-2 (Recommended):</b> The PVWMA shall ensure that all exterior lighting if used is directed downward and oriented to insure that no light source is directly visible from neighboring residential areas. If necessary, landscaping shall be provided around proposed facilities. This vegetation shall be selected, placed, and maintained to minimize off-site light and glare onto surrounding areas. In addition, highly reflective building materials and/or finishes shall not be used in the designs for proposed structures.</p>	<p>1) Prepare contract specifications for the construction contractor that include exterior lighting mitigation listed in <b>Measure 4.A.10-2</b>.</p>	PVWMA	Prior to requesting construction bids
	<p>2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	During and following construction

**TABLE D.3**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Land Use and Planning</u></b>			
<b>Measure 8.1.3-1 (Recommended):</b> The PVWMA will provide advance notification of construction activities to all property owners, residents, and businesses in the vicinity of construction areas.	<b>8.1.3-1:</b> Send notices to all property owners residents, and businesses in the project area vicinity at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place large signs along San Andreas Road, Beach Road, Trafton Road, and Highway 1 at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.	PVWMA	Prior to project construction.
<b><u>Geology and Soils</u></b>			
<b>Measure 8.2.3-1a:</b> All grading and construction shall conform to requirements of the Santa Cruz County Grading Ordinance.	<b>8.2.3-1a:</b> Review project plans to verify that grading and construction activities comply with the Santa Cruz County Grading Ordinance and that they expose as little new ground surface as possible. Document compliance or non-compliance and remedial action(s) required and submit this documentation to the Santa Cruz County Public Works Department, the Monterey County Public Works Department, and the project file.	PVWMA	Prior to project construction.
<b>Measure 8.2.3-1b:</b> Site grading and construction work areas shall expose as little new ground surface as possible. Vegetation cover should be left intact to the extent practical.	<b>8.2.3-1b:</b> Conduct inspections of the construction site to verify compliance with Mitigation Measures 8.2.3-1b, 8.2.3-1c, 8.2.3-1d, and 8.2.3-1e. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA or PVWMA's consulting engineer	During and immediately following project construction.
<b>Measure 8.2.3-1c:</b> To the extent possible, grading activities in non-cropped areas shall be limited to the period between April 15 and October 31. If dry conditions persist after October 31, one week extensions of grading activities will be obtained from the County Public Works Department. In areas where the soil is tilled, grading activities will be coordinated with the local farmers to ensure consistency between their erosion control and farming practices and construction disturbance.			

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 8.2.3-1d:</b> Implement best construction practices at all grading sites, regardless of soil erodibility hazard.</p>			
<p><b>Measure 8.2.3-1e:</b> Upon completion of construction at all sites, loose soils shall be removed or spread and all areas shall be re-soiled and reseeded to ensure that a stable soil cover will remain.</p>			
<p><b>Measure 8.2.3-1f:</b> PVWMA will prepare and implement an inspection and maintenance program for the right-of-way and all facility sites. The plan will include routine inspection plans and reporting, and prescriptive methods for correcting erosion or soil instability problems.</p>	<p><b>8.2.3-1c:</b> Prepare a report that presents the inspection and maintenance program that includes routine inspection plans and reporting, and recommendations for correcting erosion or soil instability problems. Submit this report to the project file.</p>	PVWMA	Prior to project construction.
<p><b>Measure 8.2.3-4:</b> Conduct geologic investigations of the proposed pipeline alignment and pumping facilities prior to the final design, and implement design recommendations. The investigations will specify hazards related to corrosion, weak soils and settlement, including differential settlement. The recommendations of an engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and certify that all design criteria have been met. While these measures would not ensure that some damage to the facilities would not occur, it would ensure that design standards have been met and the hazards have been reduced to an acceptable level of risk. Therefore, the impact would be reduced to a less than significant level.</p>	<p><b>8.2.3-4a:</b> Prepare a report that presents the results of the geotechnical investigation and includes design recommendations for the project. Submit this report to the project file.</p>	PVWMA's consulting engineering geologist	Prior to completion of final engineering design.
	<p><b>8.2.3-4b:</b> Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA's consulting engineering geologist	Periodically during project construction.

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 8.2.3-5:</b> Conduct geologic investigations of the proposed pipeline alignment and pumping, diversion and filtration facilities prior to the final design and implement design recommendations. The investigations will specify hazards related to ground movements and co-seismic effects, especially liquefaction. The recommendations of an engineering geologist shall be incorporated into the design and specifications and shall be implemented by the construction contractor. The construction manager shall conduct inspections and certify that all design criteria have been met. While these measures would not ensure that damage to the facilities would not occur, it would ensure that the hazards have been reduced to an acceptable level of risk and, therefore, the impact would be reduced to a less than significant level.</p>	<p><b>8.2.3-5a:</b> Prepare a report that presents the results of the geotechnical investigation and includes design recommendations for the project. Submit this report to the project file.</p> <p><b>8.2.3-5b:</b> Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA's consulting engineering geologist</p> <p>PVWMA's consulting engineering geologist</p>	<p>Prior to completion of final engineering design.</p> <p>Periodically during project construction.</p>
<b><u>Hydrology and Water Quality</u></b>			
<p><b>Measure 8.3.3-1:</b> Employ construction storm water quality management practices.</p>	<p><b>8.3.3-1:</b> Monitor project construction activities to ensure that storm water quality management practices are implemented. If non-compliance is noted, notify the contractor of required actions and the deadline for compliance.</p>	<p>PVWMA</p>	<p>Periodically during project construction.</p>
<p><b>Measure 8.3.3-2:</b> Obtain NPDES permit for construction dewatering and implement conditions of the permit. An NPDES permit will be required from the RWQCB for all discharges for construction dewatering. Discharges must meet water quality objectives specified in the Basin Management Plan as described in Section 3.3. The RWQCB may require certain conditions of the permit, such as treatment of the flows prior to discharge.</p>	<p><b>8.3.3-2a:</b> Prepare and submit an application for an NPDES permit to the RWQCB.</p> <p><b>8.3.3-2b:</b> Monitor construction activities to verify compliance with BMP water quality objectives and any conditions of the NPDES permit. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to project construction.</p> <p>Periodically during project construction.</p>

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 8.3.3-4:</b> Avoid construction impacts to the wells. The precise well locations shall be identified in preconstruction surveys. The pipeline construction trench, material stockpile areas and soil excavation stockpiles shall be designated in the construction plans and specifications to specifically avoid impacting the well and access to the wells.</p>	<p><b>8.3.3-4a:</b> Review construction plans and maps to ensure that the wells are identified.</p> <p><b>8.3.3-4b:</b> Monitor construction activities to verify that wells in and near the project area are avoided. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Prior to project construction.
<p><b><u>Vegetation and Wildlife</u></b></p>			
<p>See Table 4.</p>			
<p><b><u>Cultural Resources</u></b></p>			
<p><b>Measure 8.5.3-1a:</b> Final pipeline and facility plans shall locate facilities and pipeline alignments away from these identified important cultural resource sites. A qualified cultural resource specialist shall be retained to assist in identifying the areal extent of important cultural resource sites to be avoided, which may include the preparation of detailed cultural resource evaluation reports and consultation with local, state, and federal agencies as well as the local Native American Commission.</p>	<p><b>8.5.3-1a:</b> Determine the areal extent of important cultural resources sites within the project area. Review project plans to verify that project facilities would not be located within these sites.</p>	PVWMA's consulting archaeologist	Prior to final engineering design.
<p><b>Measure 8.5.3-1b:</b> If important cultural resource sites cannot be avoided, the Pajaro Water Management Agency will enter into a Programmatic Agreement with the U.S. Army Corps of Engineers, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation to develop an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include documentation and recordation of the resource, recovery and relocation, or stabilization of the resource.</p>	<p><b>8.5.3-1b:</b> Prepare contract specifications for the construction contractor that require implementation of the cultural resources mitigation plan developed under the Programmatic Agreement.</p> <p><b>8.5.3-1c:</b> Monitor construction activities to ensure that the cultural resources mitigation plan is implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Prior to requesting construction bids.
		PVWMA's consulting archaeologist	Periodically during project construction.

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 8.5.3-2:</b> Should any as yet undiscovered cultural resources, such as structural features, or unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work will be suspended and PVWMA staff will be contacted. A qualified cultural resource specialist will be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources.</p>	<p><b>8.5.3-2a:</b> Submit a resource recovery plan for the site including findings and recommendations and submit it to PVWMA, the U.S. Army Corps of Engineers, the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the project file.</p> <p><b>8.5.3-2b:</b> Submit a document verifying that evaluation of the materials and their recovery occurred. Prepare a report of findings and submit it to PVWMA, the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the project file.</p>	<p>PVWMA's consulting archaeologist</p> <p>PVWMA's consulting archaeologist</p>	<p>During project construction, if potential resources are encountered.</p> <p>During project construction, if potential resources are encountered.</p>
<p>In addition, pursuant to Sections 5097.107 and 5097.108 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	<p><b>8.5.3-3a:</b> Review construction maps and monitor construction sites to ensure that resource boundaries are marked as exclusion zones.</p>	<p>PVWMA's consulting archaeologist</p>	<p>Prior to, and during, project construction.</p>
<p><b>Measure 8.5.3-3b:</b> Construction supervisory personnel shall be notified of the existence of these resources and required to keep personnel and equipment away from these areas. During construction and operations, personnel and equipment will be restricted to the surveyed corridor.</p>	<p><b>8.5.3-3b:</b> Prepare contract specifications for the construction contractor that require all construction personnel and equipment remain within the surveyed corridor.</p>	<p>PVWMA</p>	<p>Prior to requesting construction bids.</p>

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 8.5.3-3c:</b> Monthly monitoring of cultural resources to be avoided shall be completed to insure that no inadvertent damage to the resources occurs as a result of construction or construction-related activities. If damage is detected, a guard will be posted to patrol the site and adjacent important resources (such as gravestones and churches).	<b>8.5.3-3c:</b> Monitor cultural resources to be avoided on a monthly basis during project construction to verify that no damage occurs.	PVWMA's consulting archaeologist	Monthly during project construction.
<b><u>Traffic and Circulation</u></b>	<b>8.5.3-3d:</b> If damage to a cultural resource is detected, hire a guard to patrol the site and adjacent important resources.	PVWMA	During project construction, if damage is detected.
<b>Measure 8.6.3-1a (Recommended):</b> Schedule truck trips outside of peak commute hours.	<b>8.6.3-1a:</b> Prepare contract specifications for the construction contractor that require construction truck trips be scheduled during off-peak hours and that haul routes be selected to minimize truck traffic on local roadways.	PVWMA	Prior to requesting construction bids.
<b>Measure 8.6.3-1b (Recommended):</b> Use haul routes that minimize truck traffic on local roadways to the extent possible.	<b>8.6.3-2a:</b> Prepare contract specifications for the construction contractor that limit construction hours to off-peak traffic periods.	PVWMA	Prior to requesting construction bids.
<b>Measure 8.6.3-2b:</b> The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plan shall be reviewed for appropriateness, and approved by Caltrans and the governing Public Works Departments.	<b>8.6.3-2b:</b> Prepare contract specifications for the construction contractor that require preparation of a traffic control plan.	PVWMA	Prior to requesting construction bids.
<b>Measure 8.6.3-3a:</b> Construction trenches shall be covered by steel trench plates to allow access to driveways.	<b>8.6.3-2c:</b> Review the proposed traffic control plan to ensure that measures to maintain traffic flows are included. Notify the construction contractor if any modifications are required.	PVWMA, Caltrans, Santa Cruz County Public Works Department	Prior to project construction.
<b>Measure 8.6.3-3a:</b> Construction trenches shall be covered by steel trench plates to allow access to driveways.	<b>8.6.3-3a:</b> Monitor construction activities to ensure that steel trench plates are placed on construction trenches along driveways. If non-compliance is noted, notify construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction.

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 8.6.3-3b:</b> To minimize disruption of emergency vehicle access, contractors will work with affected jurisdictions (Santa Cruz or Monterey County or City of Watsonville) to identify detours during construction.	<b>8.6.3-3b:</b> Prepare contract specifications for the construction contractor that require the contractor contact the Santa Cruz County Public Works Department to determine detours.	PVWMA	Prior to project construction.
<b>Measure 8.6.3-3c:</b> Police, fire, and emergency services shall be notified of the timing, location, and duration of construction activities and the locations of detours and lane closures.	<b>8.6.3-3c:</b> Send notices to police, fire, and emergency service providers at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place a large sign along San Andreas Road at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.	PVWMA	Prior to project construction.
<b>Measure 8.6.3-4:</b> Conduct a preconstruction survey of road conditions on key access routes to the project site. The pavement conditions of local streets and designate roads judged to be in good condition for use by heavy truck traffic will be monitored. Roads damaged by construction shall be repaired to a condition equal to, or better than, that which existed prior to construction activity.	<b>8.6.3-4a:</b> Prepare contract specifications for the construction contractor that require that a preconstruction survey of key routes to the project site be conducted, and that roads damaged by construction be repaired.	PVWMA	Prior to project construction.
	<b>8.6.3-4b:</b> Inspect access roads to the project site to ensure that roads are repaired following project construction, if necessary. If roads are not repaired, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Following project construction.
<b>Measure 8.6.3-5a:</b> The traffic control plans prepared by the contractor (see Mitigation Measure 8.6.3-2b) shall include detours for bicyclists.	<b>8.6.3-5a:</b> Review the traffic control plans to ensure that detours for bicyclists are included. If they are not included, notify the construction contractor of required revisions to the traffic control plan and the deadline for submitting the revised plan.	PVWMA	Prior to project construction.
<b>Measure 8.6.3-5b:</b> The contractor shall provide advanced public notification of construction activity and roadway/access closures.	<b>8.6.3-5b:</b> Implement Monitoring and Reporting Action 8.1.3-1, above.	PVWMA	Prior to project construction.

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Air Quality</u></b>			
<b>Measure 8.7.3-1:</b> The construction contractor shall implement a dust control program.	<b>8.7.3-1a:</b> Prepare contract specifications for the construction contractor that require implementation of a dust control program.	PVWMA	Prior to requesting construction bids.
	<b>8.7.3-1b:</b> Monitor construction activities to verify that the measures of the dust control program are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction.
<b><u>Socioeconomics and Public Utilities</u></b>			
<b>Measure 8.8.2-1:</b> A detailed study identifying utilities along the proposed alignment will be done during the pre-design stages of the project.	<b>8.8.2-1:</b> Conduct a detailed study of utilities along the project alignment and submit a report documenting the results of the study to PVWMA.	PVWMA's consulting engineer	Prior to final engineering design.
<b>Measure 8.8.2-2:</b> Refer to Mitigation Measures 8.6.3-3a, b, c.	<b>8.8.2-2:</b> See Monitoring and Reporting Actions 8.6.3-3a, b, c.		
<b>Measure 8.8.2-5:</b> The PVWMA will establish a procedure to compensate growers for the financial losses that they incur as a result of the impacts caused by the excavation and construction activities that occur in the easements for the placement of the local distribution system. The growers will receive compensation based upon the total amount of farmland disrupted, the amount of time of the disruption, the historical type of crop planted on the land and the current year unit market price for the unplanted crop.	<b>8.8.2-5:</b> Develop a procedure for compensating growers with financial losses resulting from project construction activities. Prepare a report outlining this procedure and submit it to the project file.	PVWMA	Prior to project construction.
<b><u>Visual/Aesthetic and Recreational Resources</u></b>			
<b>Measure 8.9.3-1a:</b> The PVWMA will revegetate disturbed natural areas to minimize textural contrasts with the surrounding vegetation using grasses, shrubs and trees typical of the immediately surrounding area.	<b>8.9.3-1a:</b> Prepare contract specifications for the construction contractor that require revegetation of disturbed areas, restoration of the topography, and repair of any damaged roads within the project area.	PVWMA	Prior to requesting construction bids.

**TABLE D.3 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR THE INTEGRATED COASTAL DISTRIBUTION SYSTEM**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure 8.9.3-1b:</b> The PVWMA will ensure that its contractors restore the topography of disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.</p>	<p><b>8.9.3-1b:</b> Inspect the project area to verify that disturbed areas are revegetated, the topography is restored, and roads are repaired, if necessary. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Following project construction.
<p><b>Measure 8.9.3-2:</b> Implementation of Measures 8.6.3-4, 8.6.3-5a and 8.6.3-5b would ensure that damaged roads would be repaired to pre-construction conditions, and that detours would be provided for bicyclists and motorists during the construction period.</p>	<p><b>8.9.3-2:</b> See Monitoring and Reporting Actions 8.6.3-4, 8.6.3-5a and 8.6.3-5b, above.</p>		



**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

<b>Agency to Perform Commitment</b>	<b>Location<sup>1</sup></b>	<b>ED #</b>	<b>Brief Description of Mitigation</b>	<b>Deadline</b>	<b>Status</b>
PVWMA	Pipeline crossing of culvert within Betabel Road: Data point 7		<p>Exclusionary fencing (orange netting) will be placed between riparian zone and construction areas. Confine construction activities to Betabel Road.</p> <p>If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.</p>	<p>During construction</p> <p>15 days prior to construction, During construction</p>	
PVWMA	Pajaro River crossing west of HWY 101: Data point 14		<p>Construction will be underground (horizontal directional drilling, microtunneling, or bore-and-jack).</p> <p>Exclusionary fencing (orange netting) will be placed between riparian zone and construction areas.</p> <p>All construction will be completed between June 15 and November 1 to minimize direct impacts to SCCS (if the channel is dry, construction can occur prior to June 15).</p> <p>A qualified biological monitor will be on site during underground stream crossing activities.</p> <p>If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.</p>	<p>During construction</p> <p>15 days prior to construction, During construction</p>	
PVWMA	Open trench crossing of two unnamed drainages near Pescadero Creek: Data points 25 and 27		<p>Standard protection measures for California red-legged frog from programmatic Biological Opinion</p>	<p>15 days prior to construction</p> <p>During construction, After construction</p>	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

Agency to Perform Commitment	Location <sup>1</sup>	ED #	Brief Description of Mitigation	Deadline	Status
PVWMA	Open trench crossing of two unnamed drainages near Pescadero Creek: Data points 25 and 27 (cont.)		If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Sargent Creek open trench crossing: Data point 24		Project disturbance corridor width will be confined to 40 feet or less in riparian areas. Corridor will be located in area of drainage with previous disturbance (i.e. tractor road) or least riparian cover. Revegetation of wetland and riparian habitat at a ratio acceptable to CDFG and USFWS and implementation of a monitoring and reporting plan.	After construction	
PVWMA	Sargent Creek open trench crossing: Data point 24		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	
PVWMA	Sargent Creek open trench crossing: Data point 24		All construction will be completed between June 15 and November 1 to minimize direct impacts to SCCS (if the channel is dry, construction can occur prior to June 15).	During construction	
PVWMA	Sargent Creek open trench crossing: Data point 24		Capture and relocation of steelhead, water diversion, screened pumping, sediment curtains, spill prevention plan, biological monitor, and site restoration.		
PVWMA	Sargent Creek open trench crossing: Data point 24		If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

<b>Agency to Perform Commitment</b>	<b>Location<sup>1</sup></b>	<b>ED #</b>	<b>Brief Description of Mitigation</b>	<b>Deadline</b>	<b>Status</b>
PVWMA	Sargent Creek open trench crossing: Data point 24 (cont.)		Project disturbance corridor width will be confined to 40 feet or less in riparian areas. Corridor will be located in area of drainage with previous disturbance (i.e. tractor road) or least riparian cover. Revegetation of wetland and riparian habitat at a ratio acceptable to CDFG and USFWS and implementation of a monitoring and reporting plan.	After construction	
PVWMA	Open trench crossing of Pescadero Creek: Data point 23		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	
			Conduct preconstruction surveys for WPT eggs and nests.	15 days prior to construction	
			All construction will be completed between June 15 and November 1 to minimize direct impacts to SCCS (if the channel is dry, construction can occur prior to June 15).	During construction	
			Capture and relocation of steelhead, water diversion, screened pumping, sediment curtains, spill prevention plan, biological monitor, and site restoration.		
			If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Open trench crossing of Pescadero Creek: Data point 23 (cont.)		Project disturbance corridor width will be confined to 40 feet or less in riparian areas. Corridor will be located in area of drainage with previous disturbance (i.e. tractor road) or least riparian cover. Revegetation of wetland and riparian habitat at a ratio acceptable to CDFG and USFWS and implementation of a monitoring and reporting plan.	After construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

<b>Agency to Perform Commitment</b>	<b>Location<sup>1</sup></b>	<b>ED #</b>	<b>Brief Description of Mitigation</b>	<b>Deadline</b>	<b>Status</b>
PVWMA	Open trench crossing of drainage east of Soda Lake: Data point 9		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	
			Preconstruction surveys for California tiger salamander according to CDFG protocol (1998) and burrow excavation and relocation (see page 6-25).	Two years prior to construction During construction	
PVWMA	Open trench pipeline crossing of Pajaro River on Graniterock property: Data point 48		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	
			Conduct preconstruction surveys for WPT eggs and nests.	15 days prior to construction	
PVWMA	Open trench pipeline crossing of Pajaro River on Graniterock property: Data point 48 (cont.)		All construction will be completed between June 15 and November 1 to minimize direct impacts to SCCS (if the channel is dry, construction can occur prior to June 15).	During construction	
			Capture and relocation of steelhead, water diversion, screened pumping, sediment curtains, spill prevention plan, biological monitor, and site restoration.		
			If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

Agency to Perform Commitment	Location <sup>1</sup>	ED #	Brief Description of Mitigation	Deadline	Status
			Project disturbance corridor width will be confined to 40 feet or less in riparian areas. Corridor will be located in area of drainage with previous disturbance (i.e. tractor road) or least riparian cover. Revegetation of wetland and riparian habitat at a ratio acceptable to CDFG and USFWS and implementation of a monitoring and reporting plan.	After construction	
PVWMA	Open trench crossing of drainage west of Aromas: Data point 22		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	
PVWMA	Pajaro River pipeline crossing west of HWY 1: Data point 1		Construction will be underground (horizontal directional drilling, microtunneling, or bore-and-jack); no construction activity within riparian area.  Exclusionary construction fencing (orange netting) to be placed at around construction areas.  All construction will be completed between June 15 and November 1 to minimize direct impacts to SCCS (if the channel is dry, construction can occur prior to June 15).  A qualified biological monitor will be on site during underground stream crossing activities.	During construction	
			If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Open trench pipeline crossings of Watsonville Slough: Data points 30 and 37		Standard protection measures for California red-legged frog from programmatic Biological Opinion	15 days prior to construction During construction, After construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

<b>Agency to Perform Commitment</b>	<b>Location<sup>1</sup></b>	<b>ED #</b>	<b>Brief Description of Mitigation</b>	<b>Deadline</b>	<b>Status</b>
PVWMA	Pipeline construction adjacent to irrigation ponds		Exclusionary fencing (silt fencing) will be placed between pond and construction areas. Confine construction activities to farm roads and agricultural fields.	During construction	
PVWMA	Pipeline construction adjacent to irrigation ponds (cont.)		If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Pipeline crossing of Hanson Slough: Data point 38		Construction will be underground (horizontal directional drilling, microtunneling, or bore-and-jack); no construction activity within riparian area.  Exclusionary construction fencing (orange netting) to be placed at around construction areas.	During construction	
			If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Pipeline construction adjacent to Harkins Slough: Data point 39		Exclusionary fencing (silt fencing) will be placed between slough and construction areas. Confine construction activities to farm roads and agricultural fields.  If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	During construction  15 days prior to construction, During construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

<b>Agency to Perform Commitment</b>	<b>Location<sup>1</sup></b>	<b>ED #</b>	<b>Brief Description of Mitigation</b>	<b>Deadline</b>	<b>Status</b>
PVWMA	Pipeline crossing at road culvert of drainage south of Trafton Road: Data point 44		Standard protection measures for California red-legged frog from programmatic Biological Opinion  If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction During construction, After construction  15 days prior to construction, During construction	
PVWMA	Pipeline construction adjacent to Bennett Slough: Data point 56		Exclusionary fencing (silt fencing) will be placed between slough and construction areas. Confine construction activities to Struve Road and agricultural fields.  If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	During construction  15 days prior to construction, During construction	
PVWMA	Pipeline crossing of McClusky Slough: Data point 57		Construction will be underground (horizontal directional drilling, microtunneling, or bore-and-jack); no construction activity within riparian area.  Exclusionary fencing (silt fencing) will be placed between slough and construction areas. Confine construction activities to Struve Road and agricultural fields.	During construction	
PVWMA	Pipeline crossing of McClusky Slough: Data point 57 (cont.)		If construction activities are scheduled during the breeding season (March 1 through August 15), preconstruction surveys and no-disturbance buffer zones will be established around active bird nests until young have fledged.	15 days prior to construction, During construction	
PVWMA	Potential San Joaquin kit fox habitat		Preconstruction surveys of potential dens	15 to 30 days prior to construction	

**TABLE D.4 (Continued)**  
**ENVIRONMENTAL COMMITMENTS FOR BIOLOGICAL RESOURCES FOR THE REVISED BMP PROJECT**

Agency to Perform Commitment	Location <sup>1</sup>	ED #	Brief Description of Mitigation	Deadline	Status
PVWMA	Potential burrowing owl habitat		Implement additional measures from <i>USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox</i>	During construction	
			Preconstruction surveys for occupied burrows	15 days prior to construction	
			Passive relocation or seasonal avoidance of occupied burrows according to the California Burrowing Owl Consortium guidelines	During construction	

<sup>1</sup> Data points refer to Figures B1 through B6 in the Map Appendix

**TABLE D.5  
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b><u>Land Use and Planning</u></b>			
<p><b>Measure 5.D.1-1 (Recommended):</b> Implement <b>Measure 4.A.1-1.</b></p> <p><b>Measure 4.A.1-1 (Recommended):</b> Advance notification of construction activities should be provided to all property owners, residents, and businesses in the vicinity of construction areas.</p> <p>See also mitigation measures in Sections 4.A.6, Traffic and Circulation, 4.A.7, Air Quality, and 4.A.8, Noise, of this EIR.</p>	<ol style="list-style-type: none"> <li>1) Send notices to all property owners residents, and businesses in the project area vicinity at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place large signs along roads in the project vicinity at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.</li> </ol>	PVWMA	Prior to project construction
<b><u>Geology and Soils</u></b>			
<b>Measure ASR-1:</b> Implement <b>Measure 5.A.2-2.</b>			
<p><b>Measure 5.A.2-2:</b> All diversion and pipeline facilities will comply with applicable policies and appropriate engineering investigation practices necessary to reduce the potential detrimental effects of expansive soils, and corrosivity. Appropriate geotechnical studies will be conducted using generally accepted and appropriate engineering techniques for determining the susceptibility of the sites to unstable, weak or corrosive soils. A licensed geotechnical engineer will prepare recommendations applicable to foundation design, earthwork, and site preparation prior to or during the project design phase. Recommendations will address mitigation of site-specific, adverse soil and bedrock conditions that could hinder development. Project engineers will implement the recommendations. Geotechnical design and design criteria will comply with applicable codes and requirements of the 1994 or 1997 UBC with California additions (CCR Title 24), applicable City construction and grading ordinances.</p>	<ol style="list-style-type: none"> <li>1) Include geotechnical report with recommendations as an appendix to construction specifications.</li> <li>2) Review construction specifications to ensure that design recommendations were included.</li> <li>3) Monitor project construction activities to verify compliance with the recommendations of the geotechnical report. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA	Prior to requesting construction bids
		PVWMA	Prior to project construction
		PVWMA's consulting engineering geologist	During and immediately following project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure ASR-2:</b> Implement <b>Measures 5.A.2-3a</b> through <b>5.A.2-3f</b>.</p>	<p>1) Obtain Monterey and Santa Cruz County Grading Permits.</p>	PVWMA	Prior to project construction
<p><b>Measure 5.A.2-3a:</b> All grading and construction will conform to requirements of the Monterey and Santa Cruz Counties Grading Ordinances.</p>	<p>2) Review construction specifications to ensure that design recommendations for ASR construction and pipeline installation were included.</p>	PVWMA	Prior to project construction
<p><b>Measure 5.A.2-3b:</b> Site grading and construction work areas will expose as little new ground surface as possible. Vegetation cover should be left intact to the extent practical.</p>	<p>3) Monitor project construction activities to verify compliance with the construction specifications. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA's consulting engineering geologist	During and immediately following project construction
<p><b>Measure 5.A.2-3c:</b> To the extent possible, grading activities in noncropped areas will be limited to the period between April 15 and October 15. If dry conditions persist after October 15, one-week extensions of grading activities will be obtained from the County Public Works Department. In areas where the soil is tilled, grading activities will be coordinated with the local farmers to ensure consistency between their erosion control and farming practices and construction disturbance.</p>			
<p><b>Measure 5.A.2-3d:</b> Implement best construction practices at all grading sites, regardless of soil erodibility hazard.</p>			
<p><b>Measure 5.A.2-3f:</b> PVWMA will prepare and implement an inspection and maintenance program for the right-of-way and all facility sites. The plan will include routine inspection plans and reporting, and prescriptive methods for correcting erosion or soil instability problems.</p>			
<b><u>Hydrology and Water Quality</u></b>			
<p><b>Measure ASR-3:</b> All groundwater discharges associated with injection/extraction well development, initial pumping, and backwashing as well as long-term operational maintenance shall be conducted in accordance with NPDES permit issued through the RWQCB to ensure that degradation of surface water does not occur.</p>	<p>1) Monitor project construction activities to verify compliance with NPDES permit requirements. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	During project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure ASR-4a:</b> The PVWMA will operate the proposed project in compliance with the Surface Water Treatment Rule, Safe Drinking Water Act, where applicable, the SWRCB's Antidegradation Policy, and applicable DHS regulations regarding drinking water quality. Water injected into the groundwater aquifers from surface sources would be required to comply with federal and state water quality standards for drinking water and those set forth by SWRCB's Antidegradation Policy. The RWQCB has regulatory authority over injection and will require that groundwater degradation not occur and that injectate water meet both primary and secondary Title 22 standards. Federal and state drinking water standards, developed by EPA and DHS, dictate acceptable concentrations for many constituents, including fecal coliform, heavy metals, TDS, and nitrates.</p>	1) Review engineering design to ensure that design meets regulations listed in <b>Measure 5.D.3-4a</b> .	PVWMA	Prior to final engineering design
	2) Monitor project operation to verify compliance with regulations listed in <b>Measure 5.D.3-4a</b> . If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	During, and following, project construction
<p><b>Measure ASR-4b:</b> The PVWMA will prepare and implement a treatment and monitoring program to ensure that surface water intended for injection is monitored and adequately treated so that applicable federal and state drinking water standards are not exceeded. Proposed injectate will require treatment to meet Surface Water Treatment Rule provisions and to remove, among other potential constituents, nitrate, iron, manganese, and potentially aluminum and arsenic. Treatment of the water to meet regulatory requirements could require multiple treatment technologies. Given the variable and sometimes high levels of turbidity in the College Lake injectate, compliance with the Surface Water Treatment Rule could require conventional treatment, consisting of coagulation, flocculation, sedimentation, filtration, and disinfection. Removal of dissolved constituents, including metals that exceed primary and secondary Title 22 standards, will require additional treatment technologies, such as reverse osmosis and ion exchange. The PVWMA will prepare and implement a plan that addresses regular monitoring of surface water sources and defines adequate treatment methods to reduce concentrations of contaminant, if present, to levels below the federal and state drinking water standards.</p>	1) Monitor surface water intended for injection to determine compliance with applicable federal and state regulations. If non-compliance is noted, notify regulatory agencies and, in consultation with the agencies, adjust water treatment methods to reduce contaminants to levels below the federal and state drinking water standards.	PVWMA or PVWMA's consulting engineer	Following project completion

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<p><b>Measure ASR-5:</b> PVWMA will complete a hydrogeologic feasibility study and testing for the proposed injection/extraction well field prior to design. PVWMA will develop a groundwater monitoring plan to monitor the groundwater elevations in the vicinity of the injection/extraction wells. The program will include procedures to adjust, if necessary, the injection/extraction rates to avoid adverse aquifer response such as mounding or drawdown.</p>	<ol style="list-style-type: none"> <li>1) Prepare hydrogeologic feasibility study.</li> <li>2) Review the groundwater monitoring plan to ensure that it includes procedures to adjust, if necessary, injection/extraction rates to avoid mounding and drawdown.</li> </ol>	PVWMA	Following conceptual well field delineation
<p><b>Cultural Resources</b></p>	<ol style="list-style-type: none"> <li>1) Determine the areal extent of important cultural resources sites within the project area. Review project plans to verify that project facilities would not be located within these sites.</li> </ol>	PVWMA's consulting archaeologist	Prior to final engineering design
<p><b>Measure ASR-6b:</b> Implement <b>Measures 4.B.5-1a</b> and <b>4.B.5-1b</b>.</p>	<p><b>4.B.5-1a:</b> Determine the areal extent of important cultural resources sites within the project area. Review project plans to verify that project facilities would not be located within these sites.</p>	PVWMA's consulting archaeologist	Prior to final engineering design
<p><b>Measure 4.B.5-1a:</b> Final pipeline and facility plans shall locate facilities and pipeline alignments away from identified cultural resource sites. A qualified cultural resource specialist shall be retained to assist in identifying the extent of important cultural resource sites to be avoided, which may include the preparation of detailed cultural resource evaluation reports and consultation with local, state, and federal agencies as well as the local Native American community and the Native American Heritage Commission.</p>	<p><b>4.B.5-1b:</b></p> <ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of the cultural resources mitigation plan developed under the Programmatic Agreement.</li> </ol>	PVWMA's consulting archaeologist	Prior to requesting construction bids
<p><b>Measure 4.B.5-1b:</b> If important cultural resource sites cannot be avoided, PVWMA will coordinate with local, state, and federal agencies in the development of an appropriate mitigation plan for the cultural resource. Possible mitigation measures for important cultural resources may include documentation and recordation of the resource, relocation, or stabilization of the resource.</p>	<ol style="list-style-type: none"> <li>2) Monitor construction activities to ensure that the cultural resources mitigation plan is implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA's consulting archaeologist	During project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure ASR-7: Implement Measure 4.A.5-1.</b>			
<p><b>Measure 4.A.5-1:</b> Should any as yet undiscovered cultural resources, such as structural features, or unusual amounts of bone or shell, artifacts, human remains, or architectural remains be encountered during any development activities, work will be suspended and PVWMA staff will be contacted. A qualified cultural resource specialist shall be retained and will perform any necessary investigations to determine the significance of the find. PVWMA will then implement any mitigation deemed necessary for the recordation and/or protection of the cultural resources. In addition, pursuant to Sections 5097.97 and 5097.98 of the State Public Resources Code and Section 7050.5 of the State Health and Safety Code, in the event of the discovery of human remains, all work must be halted and the County Coroner shall be immediately notified. If the remains are determined to be Native American, guidelines of the Native American Heritage Commission shall be adhered to in the treatment and disposition of the remains.</p>	1) Prepare a resource recovery plan for the site including findings and recommendations and submit it to PVWMA, the U.S. Army Corps of Engineers, the State Historic Preservation Officer, the Advisory Council on Historic Preservation and the project file.	PVWMA's consulting archaeologist	During project construction, if potential resources are encountered
	2) Submit a document verifying that evaluation of the materials and their recovery occurred. Prepare a report of findings and submit it to PVWMA, the State Historic Preservation Officer, the Advisory Council on Historic preservation and the project file.	PVWMA's consulting archaeologist	During project construction, if potential resources are encountered
<b>Measure ASR-8: Implement Measures 4.B.5-3a through 4.B.5-3c.</b>			
<p><b>Measure 4.B.5-3a:</b> The resource boundaries should be marked as exclusion zones both on the ground and on construction maps.</p> <p><b>Measure 4.B.5-3b:</b> Construction supervisory personnel should be notified of the existence of these resources and be required to keep personnel and equipment away from these areas. During construction and operations, personnel and equipment will be restricted to the surveyed corridor.</p>	<b>4.B.5-3a:</b> Review construction maps and monitor construction sites to ensure that resource boundaries are marked as exclusion zones.	PVWMA's consulting archaeologist	Prior to, and during, project construction
	<b>4.B.5-3b:</b> Prepare contract specifications for the construction contractor that require all construction personnel and equipment remain within the surveyed corridor.	PVWMA	Prior to requesting construction bids

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.B.5-3c:</b> Monthly monitoring of the cultural resources to be avoided should be completed to insure that no inadvertent damage to the resources occurs as a result of construction or construction-related activities. If damage is detected a guard will be posted to patrol the site and adjacent important resources (such as gravestones and churches).	<ol style="list-style-type: none"> <li>1) Monitor cultural resources to be avoided on a monthly basis during project construction to verify that no damage occurs.</li> <li>2) If damage to a cultural resource is detected, hire a guard to patrol the site and adjacent important resources.</li> </ol>	PVWMA's consulting archaeologist	Monthly during project construction
<b><u>Traffic and Circulation</u></b>			
<b>Measure 5.D.6-1 (Recommended):</b> Implement <b>Measures 4.A.6-1a</b> and <b>4.A.6-1b</b> .	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require construction truck trips be scheduled during off-peak hours and that haul routes be selected to minimize truck traffic on local roadways.</li> </ol>	PVWMA	Prior to requesting construction bids
<b>Measure 4.A.6-1a (Recommended):</b> Schedule truck trips outside of peak commute hours.			
<b>Measure 4.A.6-1b (Recommended):</b> Use haul routes that minimize truck traffic on local roadways to the extent possible.			
<b>Measure ASR-9:</b> Implement <b>Measures 4.B.6-2a</b> and <b>4.B.6-2b</b> .			
<b>Measure 4.B.6-2a:</b> Limit construction hours to off-peak traffic periods on commute streets.	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that limit construction hours to off-peak traffic periods.</li> </ol>	PVWMA	Prior to requesting construction bids
<b>Measure 4.B.6-2b:</b> The contractor shall be required to prepare traffic control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plan shall be reviewed for appropriateness, and approved by Caltrans and the governing Public Works Departments.	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require preparation of a traffic control plan.</li> <li>2) Review the proposed traffic control plan to ensure that measures to maintain traffic flows are included. Notify the construction contractor if any modifications are required.</li> </ol>	PVWMA	Prior to requesting construction bids
		PVWMA, Caltrans, Santa Cruz County Public Works Department	Prior to project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure ASR-10: Implement Measures 4.B.6-3a through 4.B.6-3c.</b>			
<b>Measure 4.B.6-3a:</b> To minimize disruption of emergency vehicle access and maintain access to driveways to adjacent land uses, PVWMA would require the contractors to maintain steel trench plates at the construction sites to restore access across open trenches. Construction trenches shall not be left open after work hours.	1) Monitor construction activities to ensure that steel trench plates are placed on construction trenches along driveways. If non-compliance is noted, notify construction contractor of required actions and the deadline for compliance.	PVWMA	Periodically during project construction
<b>Measure 4.B.6-3b:</b> To minimize disruption of emergency vehicle access, affected jurisdictions will be asked to identify detours to be posted by contractor.	1) Place a large sign along roadways in the project vicinity at least one week in advance of construction.	PVWMA	Prior to project construction
<b>Measure 4.B.6-3c:</b> The contractor will notify the appropriate police, fire, and emergency services of the timing, location, and duration of construction activities and the locations of detours and lane closures prior to beginning construction in the immediate vicinity of affected roadways.	1) Send notices to police, fire, and emergency service providers at least one week in advance of construction.	PVWMA	Prior to project construction
<b>Measure ASR-11: Implement Measure 4.A.6-2.</b>			
<b>Measure 4.A.6-2:</b> Conduct a preconstruction survey of road conditions on key access routes to the project sites (e.g., San Andreas Road). The pavement conditions of local streets judged to be in good condition for use by heavy truck traffic shall be monitored. Roads damaged by construction shall be repaired to a structural condition equal to, or better than, that which existed prior to construction activity.	1) Prepare contract specifications for the construction contractor that require that a preconstruction survey of key routes to the project site be conducted, and that roads damaged by construction be repaired.	PVWMA	Prior to project construction
	2) Inspect access roads to the project site to ensure that roads are repaired following project construction, if necessary. If roads are not repaired, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Following project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure ASR-12:</b> Implement <b>Measures 4.A.6-3a</b> and <b>4.A.6-3b</b> .			
<b>Measure 4.A.6-3a:</b> The construction contractor shall prepare traffic safety and control plans to show specific methods for maintaining traffic flows. This shall include identifying roadway locations where special trenching techniques would be used to minimize impacts to traffic flow and operations. The traffic control plans prepared by the contractor shall include recommended detours for bicyclists. The traffic control plan shall be reviewed for appropriateness, and approved by the governing Public Works Department.	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require preparation of a traffic safety and control plan.</li> <li>2) Review the proposed traffic control plan to ensure that measures to maintain traffic flows are included. Notify the construction contractor if any modifications are required.</li> </ol>	PVWMA  PVWMA	Prior to requesting construction bids  Prior to construction
<b>Measure 4.A.6-3b:</b> The contractor shall provide advanced public notification of construction activity and roadway/access closures.	<ol style="list-style-type: none"> <li>1) Send notices to all property owners, residents, and businesses in the project area vicinity at least one week in advance of construction. Publish notices in local newspapers at least one week in advance of construction. Place a large sign along each affected roadway at least one week in advance of construction. Submit copies of public notices to the project file to document compliance.</li> </ol>	Construction contractor	Prior to project construction
<b>Measure ASR-13:</b> Implement <b>Measure 5.A.6-7</b> .			
<b>Measure 5.A.6-7:</b> The traffic control plan shall include consideration of any other planned traffic detours related to nearby and concurrent construction projects.	<ol style="list-style-type: none"> <li>1) Review the traffic control plan to ensure that it considers other planned traffic detours related to concurrent construction projects. If the plan does not consider other planned detours, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	PVWMA	Prior to project construction
<b><u>Air Quality</u></b>			
<b>Measure 5.D.7-1:</b> Implement dust control program described in <b>Measure 4.A.7-1</b> .			
<b>Measure 4.A.7-1:</b> The construction contractor shall implement a dust control program that includes the following elements:	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of a dust</li> </ol>	PVWMA	Prior to requesting construction bids

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<ul style="list-style-type: none"> <li>▪ Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard.</li> <li>▪ Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.</li> <li>▪ Sweep daily (with water sweepers) all paved access roads, paved parking areas and paved staging areas at construction sites.</li> </ul> <p><b>Measure 4.A.7-1: (cont.)</b></p> <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 binders to inactive construction areas. However, do not apply these measures in operating agricultural fields under cultivation unless requested by the grower.</li> <li>▪ Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).</li> <li>▪ Limit traffic on unpaved roads to 15 mph.</li> <li>▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways.</li> <li>▪ Replant vegetation in disturbed areas as quickly as possible.</li> </ul>	<p style="text-align: center;">control program.</p> <p>2) Monitor construction activities to verify that the measures of the dust control program are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</p>	PVWMA	Periodically during project construction

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Noise</b>			
<b>Measure 5.D.8-1: Implement Measure 4.A.8-1.</b>			
<p><b>Measure 4.A.8-1:</b> PVWMA shall incorporate into contract specifications the following measures:</p> <ul style="list-style-type: none"> <li>▪ Comply with all local sound control and noise level rules, regulations, and ordinances.</li> <li>▪ Equipment and trucks used for project construction shall utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) in order to minimize construction noise impacts.</li> </ul>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require implementation of noise mitigation measures listed in <b>Measure 4.A.8-1</b>.</li> <li>2) Monitor construction activities to verify that the measures of the noise control measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to requesting construction bids</p> <p>Periodically during project construction</p>
<b>Measure 4.D.8-1: (cont.)</b>			
<ul style="list-style-type: none"> <li>▪ Impact equipment (e.g., 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. However, where use of pneumatically powered tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves would be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used (such as drilling rather than impact equipment) whenever feasible.</li> <li>▪ Stationary noise sources shall be located as far from sensitive receptors as possible. If they must be located near existing receptors, they shall be adequately muffled.</li> <li>▪ Temporary walls may be erected at some locations to reduce noise impacts to residences adjacent to construction sites.</li> </ul>			

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE	
<p><b>Measure 5.D.8-2:</b> Implement <b>Measure 5.B.8-2.</b></p> <p><b>Measure 5.B.8-2:</b> PVWMA shall incorporate into contract specifications the following measures:</p> <p>The pumping facilities shall be designed with acoustical treatments (building enclosures, louvered vents, noise walls, etc.) that are adequate to maintain potential noise generation to levels at or below ambient levels.</p>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that include measures listed in <b>Measure 5.B.8-2.</b></li> <li>2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA</p>	<p>Prior to final engineering design</p> <p>Periodically during project construction</p>	
<p><b><u>Public Services</u></b></p>	<ol style="list-style-type: none"> <li>1) Submit documentation of consultation with PG&amp;E to the project file to ensure that adequate capacity is available.</li> </ol>	<p>PVWMA</p>	<p>Prior to final engineering design</p>	
<p><b><u>Visual/Aesthetic and Recreational Resources</u></b></p>	<p><b>Measure 5.D.10-1:</b> Implement <b>Measure 4.A.10-1a</b> through <b>4.A.10-1c.</b></p>	<ol style="list-style-type: none"> <li>1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas.</li> <li>2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.</li> </ol>	<p>PVWMA</p> <p>PVWMA or PVWMA's consulting biologist</p>	<p>Prior to requesting construction bids</p> <p>Following project construction</p>

**TABLE D.5 (Continued)**  
**MITIGATION MONITORING AND REPORTING PROGRAM FOR THE SUPPLEMENTAL WELLS PROJECT**

MITIGATION MEASURE	MONITORING AND REPORTING ACTIONS	MONITORING / REPORTING RESPONSIBILITY	MONITORING / REPORTING SCHEDULE
<b>Measure 4.A.10-1b:</b> The PVWMA shall use design elements to enhance visual integration of the proposed above-ground facilities with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain.	1) Review project plans to ensure that they include design elements such as low-glare earth-tone paint to visually integrated the proposed facilities with their surroundings.	PVWMA	Prior to final engineering design
<b>Measure 4.A.10-1c:</b> The PVWMA shall ensure that its contractors restore disturbed areas along the pipeline alignment to their pre-project condition such that short-term construction disturbance does not result in long-term visual impacts.	1) Prepare contract specifications for the construction contractor that require revegetation of disturbed areas along the pipeline alignment.	PVWMA	Prior to requesting construction bids
	2) Inspect construction areas to verify that disturbed natural areas are revegetated following construction. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	Following project construction
<b>Mitigation Measure 5.D.10-2 (Recommended):</b> Implement <b>Measure 4.A.10-2.</b>			
<b>Mitigation Measure 4.A.10-2 (Recommended):</b> The PVWMA shall ensure that all exterior lighting if used is directed downward and oriented to insure that no light source is directly visible from neighboring residential areas. If necessary, landscaping shall be provided around proposed facilities. This vegetation shall be selected, placed, and maintained to minimize off-site light and glare onto surrounding areas. In addition, highly reflective building materials and/or finishes shall not be used in the designs for proposed structures.	1) Prepare contract specifications for the construction contractor that include exterior lighting mitigation listed in <b>Measure 4.A.10-2.</b>	PVWMA	Prior to requesting construction bids
	2) Monitor construction activities to verify that the measures are implemented. If non-compliance is noted, notify the construction contractor of required actions and the deadline for compliance.	PVWMA	During and following construction