

# SUMMARY

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## S.1 INTRODUCTION

This Environmental Impact Report (EIR) assesses the potential environmental impacts of the draft Revised Basin Management Plan (Revised BMP) proposed by the Pajaro Valley Water Management Agency (PVWMA). This document has been prepared in accordance with the California Environmental Quality Act (CEQA) statutes and guidelines. PVWMA is the lead agency for this CEQA process. Inquiries about the project and the CEQA process should be directed to:

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## S.2 PROJECT DESCRIPTION

PVWMA has prepared the Revised BMP to address water resources management issues in the Pajaro Valley. The Revised BMP provides a review and update of previous water supply studies to outline the extent of the Pajaro Valley's groundwater over-pumping and seawater intrusion problems. The Revised BMP identifies available options and evaluates alternative strategies to meet the agency's objectives, two of which are evaluated in detail in the EIR: the BMP 2000 Alternative and the Local-Only Alternative. **Table S.1** indicates the projects comprising these alternatives. Also evaluated are two variants of these alternatives: the Modified BMP 2000 Alternative and the Modified Local-Only Alternative, as well as a "No Project" alternative. PVWMA has not yet identified a preferred alternative.

## S.3 PROJECT OBJECTIVES

The objective of this project stems from the need to augment Pajaro Valley water supplies to address problems of groundwater overdraft and seawater intrusion. These concerns were first documented in 1953. A 1964 Bureau of Reclamation (Reclamation) San Felipe Division feasibility study also confirmed overdraft and seawater intrusion problems in the PVWMA service area.

Overdraft occurs when the amount of groundwater withdrawn from a basin exceeds the amount of water replenishing the basin. In the Pajaro Valley Basin, groundwater levels have declined as

**TABLE S.1  
COMPARISON OF LOCAL-ONLY AND BMP 2000 ALTERNATIVES**

<b>Parameter</b>	<b>Local-Only Alternative</b>	<b>BMP 2000 Alternative</b>
<b>Average Project Yield<sup>a</sup></b>	14,400 acre-feet per year (afy)	17,000 afy
<b>Conservation Required</b>	10,000 afy	5,000 afy
<b>Project Elements<sup>b</sup></b>	<ul style="list-style-type: none"> <li>▪ Recycled Water (approximately 7,700 afy)</li> <li>▪ Coastal Distribution System</li> <li>▪ Expanded College Lake with Corralitos Creek and Pinto Lake diversion facilities, Watsonville Slough Diversion, and Harkins Slough Diversion and Aquifer Storage and Recovery Project (6,700 afy)<sup>c</sup></li> </ul>	<ul style="list-style-type: none"> <li>▪ Recycled Water (4,000 afy)</li> <li>▪ Coastal Distribution System</li> <li>▪ CVP Import Pipeline (10,300 afy) with Inland Distribution System</li> <li>▪ Harkins Slough (1,100 afy)</li> <li>▪ Murphy Crossing (1,600 afy)</li> <li>▪ Supplemental wells (for supply, reliability, and peaking) (17 wells)<sup>d</sup></li> </ul>
<b>Water Quality</b>	Total Dissolved Solids (TDS) – 400-900 mg/L	TDS – less than 500 mg/L
<b>Capital Cost of Facilities</b>	<b>\$128 million<sup>d</sup></b>	<b>\$162 million<sup>d</sup></b>

<sup>a</sup> Refer to Section 2.2.3, Ability of the Alternatives to Meet the Objectives of the Revised BMP, regarding the differences in average project yield and conservation associated with the two alternatives. Does not include increase in groundwater sustainable yield.

<sup>b</sup> The following project elements were evaluated in detail in the *Pajaro Valley Water Management Agency Local Water Supply and Distribution Environmental Impact Report* and therefore are not evaluated in this EIR, except as the projects contribute to cumulative impacts: Harkins Slough, Murphy Crossing, Coastal Distribution System, and Inland Distribution System.

<sup>c</sup> Reflects an estimated 1,500 afy reduction in yield due to mitigation and facility limitations.

<sup>d</sup> The number of wells required is a function of the reliability of the water supplies selected and is expected to range from two wells (for a strategy that assumes 100-percent reliable surface water supplies) to 17 wells (for a strategy that assumes minimal surface water deliveries during drought years).

<sup>e</sup> PVWMA is seeking federal funding pursuant to Title XVI for planning, design, and construction of water recycling facilities and facilities that would provide blend water. These costs reflect a \$20 million credit for Title XVI funding. PVWMA is also exploring cost-saving opportunities with the U.S. Army Corps of Engineers for the potential expansion of College Lake.

SOURCE: RMC Engineers, 2001; adapted by Environmental Science Associates.

the groundwater pumping rate has exceeded the rate of natural replenishment. These overdraft conditions result in increased pumping costs and land subsidence that in turn can cause building settlement and increased flooding. In the coastal areas overdraft conditions have caused groundwater levels to drop below sea level, creating a landward pressure gradient that causes seawater to move inland, displacing fresh groundwater. The density difference between seawater and fresh water causes the fresh water to stratify above the sea water. As seawater encroaches into the fresh groundwater basin, water quality degrades, limiting its use for irrigation and domestic use. Eventually the wells may have to be abandoned. These conditions are not expected to stabilize without a combination of water resources management options that will balance water use with recharge.

The proposed project seeks to address the seawater intrusion problem by providing a cost-effective and environmentally sound solution to meet both current and future needs.

#### **S.4 ROLE OF THE EIR**

In 1993, PVWMA adopted a Basin Management Plan (BMP) to identify a preferred water supply alternative for meeting supply needs. A Programmatic Environmental Impact Report (PEIR) was developed for the BMP, which addressed the water import and local supply concepts at a programmatic level (PVWMA, 1993).

This EIR is (a) intended to serve as a Project EIR and provides detailed, project-level impact and mitigation analysis for proposed projects and (b) to support discretionary approvals and implementation. The level of detail in which the impacts of the projects are evaluated reflects the level of design that has occurred to date; consequently, the evaluation for some components (e.g., the Import Pipeline) is necessarily more detailed than for other components (e.g., the injection/extraction wells associated with the Aquifer Storage and Recovery Project). In the absence of specific design details, for the purposes of characterizing the magnitude of impacts, certain assumptions as to the size and location of smaller facilities have been made, as noted in the Project Description. No specific sites have been identified for the following components:

- *BMP 2000 Alternative*: supplemental wells. For the purposes of this EIR, these wells are assumed to be located on prime agricultural land.
- *Local-Only Alternative*: injection/extraction wells associated with the Aquifer Storage and Recovery Project and Watsonville Slough filtration facilities. For the purposes of this EIR, these facilities are assumed to be located on prime agricultural land.

The CEQA Guidelines require that for project-level EIRs the location of a project be specified. After specific sites have been identified for these facilities, PVWMA will determine the additional environmental review needed in accordance with CEQA.<sup>1</sup>

This document also will assist the PVWMA Board of Directors in determining which projects to approve. The Board of Directors may approve the BMP 2000 or Local-Only alternative (or the modified version of either one), or a combination of projects associated with each alternative. The format of this document is intended to facilitate project-by-project consideration of the options available for meeting the objectives of the Revised BMP.

## **S.5 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

**Table S.2**, presented at the end of this chapter, summarizes the impacts of the proposed project. For each impact considered to be significant or potentially significant, the table summarizes the recommended mitigations. **Table S.2** is only intended to provide a summary of the impacts and mitigation measures described in detail in Chapters 4, 5 and 6.

### **SIGNIFICANT AND UNAVOIDABLE IMPACTS**

The following impacts were determined to be significant and unavoidable:

#### ***LOSS OF PRIME AGRICULTURAL LAND***

The BMP 2000 Alternative would result in the permanent removal of approximately 8.5 acres of prime agricultural land from production. The facilities associated with the Local-Only Alternative would result in the permanent removal of approximately 42 acres of farmland. In addition, the Pajaro Valley Integrated Groundwater Surface Water Model (PVI GSM) indicates that approximately 2,200 acres of agricultural land would need to be fallowed to meet the objectives of the Local-Only Alternative, and that additional acreage would need to be fallowed in the future.

#### ***CONSTRUCTION FACILITIES ACROSS ACTIVE FAULT TRACES***

Portions of the Import Pipeline alignment cross the active San Andreas and Sargent faults. A major displacement of either fault could result in pipeline rupture. The EIR identifies a number of measures to mitigate this impact (pipe specifications at fault crossings, special construction techniques and instrumentation, isolation valves, et al.); however, these measures cannot eliminate the chance that the pipe would rupture in a major earthquake.

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<sup>1</sup> CEQA Guidelines Sections 15162, 15163, and 15164 address the requirements for preparing subsequent EIRs and Negative Declarations, Supplemental EIRs, and Addenda to EIRs.

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## ***GENERATION OF CRITERIA AIR POLLUTANTS DURING CONSTRUCTION (PM<sub>10</sub>)***

Grading, excavation and fill for construction of the following projects would generate particulate matter (PM<sub>10</sub>) in excess of standards established by the Monterey Bay Unified Air Pollution Control District:

- Import Pipeline (BMP 2000 Alternative)
- Expanded College Lake (Local-Only Alternative)
- Corralitos Creek and Pinto Lake Diversions (Local-Only Alternative)
- Aquifer, Storage and Recovery (Local-Only Alternative)

The EIR identifies a number of standard measures to reduce fugitive dust from construction (watering construction sites daily, covering loads of soil, et al.), but for these projects, PM<sub>10</sub> emissions would remain above the significance threshold of 82 pounds per day.

## ***SECONDARY EFFECTS OF GROWTH***

Implementation of the BMP Project (either alternative) would reduce a constraint to growth: groundwater supply reliability. The project could accommodate an amount of growth that is consistent with regional growth projections, but that could indirectly result in potentially significant secondary effects of growth. Some of these secondary effects of growth could be significant and unavoidable, while others are significant but mitigable. Significant unavoidable impacts that could occur as a result of planned growth include: loss of agricultural land and open space, increase demand on groundwater resources, and changes in visual character.

PVWMA does not have the authority to make land use and development decisions. It does not approve growth but does have a responsibility to manage and protect the groundwater resources in the service area. PVWMA does have the ability and responsibility to mitigate the impacts of growth on groundwater resources by implementing management actions that keep the basin in balance and prevent/reduce salt water intrusion. Implementation of the BMP 2000 program will serve to mitigate the secondary effects of planned growth on the groundwater resources.

Authority to implement such measures rests with the land use jurisdictions – City of Watsonville, Monterey County, Santa Cruz County, and San Benito County – which enforce local, state, and federal regulations and mitigation requirements through the development approval and permit process. Through the CEQA process and the development permit process, these local land use agencies impose mitigation requirements on development projects to address the secondary effects of growth and identify measures that must be implemented by other agencies, such as the Regional Water Quality Control Board, the California Department of Fish and Game, and Air Quality District, among others. PVWMA finds that mitigation of the secondary effects of growth is primarily within the authority and jurisdiction of other public agencies and looks to those agencies to implement such measures as appropriate and consistent with their authorities.

## SIGNIFICANT IMPACTS THAT CAN BE MITIGATED

The remaining impacts identified for the two alternatives can be mitigated to less-than-significant levels, as indicated in **Table S.2**. Many of the measures identified to mitigate these impacts are standard approaches to reducing impacts (e.g., dust control plans), although some may require project redesign or place a constraint on operations that alters a particular project or alternative. Examples of the latter include:

- *Advanced Water Treatment.* Two aspects of the Local-Only Alternative, recharge of recycled water and injection of water from local supplies into the groundwater basin, would require advanced treatment. Implementing advanced treatment of recycled water would require additional facilities and processes at the Recycled Water Facility, and a larger (19-acre instead of 8-acre) site. Implementation of this measure could, in turn, generate additional environmental impacts not fully assessed in this EIR.
- *Steelhead Mitigation.* In order to maintain sufficient streamflow in Corralitos Creek for steelhead, the following mitigation would be required: a minimum bypass flow for Corralitos Creek of 15 cubic feet per second (cfs), a maximum instantaneous diversion rate of 6 cfs and restricts diversions to December 15 through March 31. These measures in turn affect the yield and operating characteristics of the Corralitos Creek Diversion project, which is part of the Local-Only Alternative. In addition, the design of facilities proposed for the Expanded College Lake project would have to be modified to facilitate fish passage.

## S.6 OTHER ALTERNATIVES

Chapter 6 describes other alternatives that were presented in the Revised BMP. Alternatives discussed therein include:

- **No Project Alternative.** Required by CEQA. Evaluates continuation of existing conditions and likely consequences.
- **Modified BMP 2000 Alternative.** Injection of CVP water into the groundwater basin for temporary storage and subsequent extraction; no Murphy Crossing project; no Inland Distribution System; smaller diameter Import Pipeline.
- **Modified Local Alternative.** Supplements Local-Only Alternative with CVP water; blends recycled water prior to recharge; adds another recharge basin for recycled water.

## S.7 ALTERNATIVES COMPARISON AND ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Consistent with the CEQA Guidelines (Section 15126.6[a]), the comparison of alternatives and determination of the environmentally superior alternative is based on the ability of the alternative to meet the basic objectives of the project while avoiding or substantially lessening any significant impacts. Consequently, this section presumes implementation of mitigation measures

identified in the EIR. The key summary points regarding the impacts associated with the alternatives are:

- All of the four “action” alternatives—the BMP 2000 Alternative, the Local-Only Alternative, the Modified BMP 2000 Alternative, and the Modified Local-Only Alternative—are environmentally superior to the No Project Alternative. The No Project Alternative would allow for continued degradation of the groundwater basin from overdraft and seawater intrusion, and does not satisfy any of the project objectives.
- The Local-Only Alternative does not satisfy the primary objective of the project without fallowing farmland, while the other three action alternatives meet the project’s basic objectives.
- Most of the impacts result from construction activities. To a great extent, these impacts can be mitigated to less-than-significant levels with measures identified in this EIR.
- The four action alternatives present different combinations of the same or similar components and, consequently, have many of the same or similar impacts.
- The alternatives that involve more construction generally result in more (greater magnitude) impact. However, traffic, air quality, and construction noise impacts do not substantially differ from one alternative to the next. Any of the action alternatives would result in a significant unavoidable temporary increase in PM10 emissions; traffic and noise impacts would be similar and could be mitigated to less-than-significant levels.
- The BMP 2000, Modified BMP 2000, and Modified Local-Only Alternative all include a version of the Import Pipeline. The difference in pipeline diameter would not materially affect the scope and magnitude of the impacts of constructing and operating an Import Pipeline. The construction corridor (which determines the scope of impacts to surface features—vegetation and wildlife habitat, agricultural land, stream crossings, et al) essentially would be same under any of these alternatives.
- Growth inducement potential is the same for all of the alternatives.

The distinction among the alternatives is the ability to meet the basic objectives of the project while reducing environmental impacts, and the degree of impact relative to the following environmental issues: water quality, land use (permanent loss and fallowing of prime farm land), seismic hazards, and biological resource impacts. These issues are discussed below. **Table S.3** presents a comparison of the distinguishing environmental effects of the alternatives. Significant and unavoidable impacts listed in the table are denoted by an asterisk; all other impacts could be mitigated to a less-than-significant level.

### S.7.1 GROUNDWATER HYDROLOGY AND WATER QUALITY

The primary issues that distinguish the alternatives relate to groundwater hydrology and water quality. Most notable is the inability of the Local-Only Alternative to achieve the primary

**TABLE S-3  
COMPARISON OF ALTERNATIVES—IDENTIFICATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE<sup>a</sup>**

IMPACT	CHARACTERIZATION OF IMPACTS FOR EACH ALTERNATIVE			
	BMP 2000 Alternative	Modified BMP 2000 Alternative	Local-Only Alternative	Modified Local-Only Alternative
<b>Groundwater Management<sup>b</sup></b>	Yes	Yes	No	Yes
<b>Water Quality - Groundwater</b>	Less Adverse	Least Adverse	Most Adverse	More Adverse
<b>Permanent Conversion of Agricultural Land</b>	Least Adverse*	Least Adverse*	Most Adverse*	More Adverse*
<b>Land Fallowing</b>	No Impact	No Impact	Most Adverse*	No Impact
<b>Geology, Soils and Seismicity</b>	Most Adverse*	Most Adverse*	Least Adverse	Most Adverse*
<b>Aquatic Habitat</b>	Less Adverse	No Impact	Most Adverse	More Adverse
<b>Wetlands/Waters of the US/Riparian Habitat</b>	Most Adverse, Temporary	Least Adverse, Temporary	More Adverse, Temporary <sup>c</sup>	More Adverse, Temporary
<b>Upland Species—Plants</b>	No Impact	No Impact	Most Adverse	Most Adverse
<b>Upland Species—Wildlife</b>	Most Adverse, Temporary	Most Adverse, Temporary	No Impact	Most Adverse, Temporary
<b>Visual Quality</b>	Least Adverse	Least Adverse	Most Adverse	More Adverse
<b>RANKING<sup>d,e</sup></b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>3</b>

<sup>a</sup> This comparison table considers the major environmental issues that distinguish the four alternatives. Impacts related to other environmental issues, such as traffic, air quality and noise, would be temporary construction impacts that would be similar for all the alternatives and therefore they are not presented in this table.

<sup>b</sup> Evaluation of alternative's ability to achieve primary project objective.

<sup>c</sup> Involves less than one acre of permanent impact to wetlands and waters of the U.S.

<sup>d</sup> This ranking considers environmental factors only; other factors, such as cost and feasibility, were not considered in this ranking. This ranking assumes that the mitigation measures identified in this EIR will be implemented.

<sup>e</sup> Alternative Ranking

4 – Alternative with the most adverse environmental impacts

1 – Environmentally Superior Alternative

\* Denotes a significant unavoidable impact.

objective of balancing the basin and arresting seawater intrusion without fallowing more than 2,200 acres of land. All other alternatives provide sufficient water to meet the project's objectives.

With respect to water quality impacts, those alternatives with more CVP water relative to local supplies have better water quality and, consequently, lesser magnitude impacts. (For an overview of source water quality, refer to Table 2.3 in Chapter 2.) The Local-Only Alternative would have the worst impacts relative to water quality because of source water quality problems for injection/extraction of surface water, and the direct use and recharge of unblended recycled water. This alternative would require advanced water treatment, the implementation of which would create additional environmental impacts (additional facilities would impact more prime agricultural land). The BMP 2000 and Modified BMP 2000 alternatives have the highest quality water (between the two, the Modified BMP Alternative would have incrementally better source water quality because it includes more CVP water and no water from the Pajaro River at Murphy Crossing).

### S.7.2 LOSS OF PRIME AGRICULTURAL LAND

Each of the four alternatives would result in the loss of prime agricultural land. For the BMP 2000 Alternative, construction of the Recycled Water Facility and 17 supplemental well sites would result in the permanent conversion of up to 8.5 acres of prime farmland. The Import Pipeline and the Inland and Coastal distribution systems would disrupt agricultural operations along the alignment temporarily during construction, but would not result in a permanent conversion of agricultural land.

The Modified BMP 2000 Alternative also would permanently convert up to 8.5 acres of prime agricultural land for construction of the Recycled Water Facility and 17 supplemental wells. The Import Pipeline would not result in permanent conversion of agricultural land.

Under the Local-Only Alternative, up to 41.6 acres of prime farmland would be permanently converted due to construction of the Recycled Water Facility, Expanded College Lake, Corralitos Creek Pump Station, and Aquifer Storage and Recovery (ASR) components. The Local-Only Alternative also would require the fallowing of more than 2,200 acres of irrigable prime farmland.

For the Modified Local-Only Alternative, the Harkins Slough, Pinto Lake Diversion, Watsonville Slough Diversion, Import Pipeline, Recycled Water Facility, College Lake, North Dunes recharge basin, and Southeast Dunes recharge basin components would result in the permanent conversion of 30.7 acres of farmland. No land fallowing would be required under this alternative.

### S.7.3 GEOLOGY, SOILS AND SEISMICITY

Portions of the Import Pipeline alignment proposed under the BMP 2000 Alternative, the Modified BMP 2000 Alternative, and the Modified Local-Only Alternative cross the active

San Andreas and Sargent faults. A major displacement of either fault would result in pipeline rupture. The EIR identifies a number of measures to mitigate this impact (pipe specifications at fault crossings, special construction techniques and instrumentation, isolation valves, et al.); however, these measures cannot eliminate the chance that the pipe could rupture in a major earthquake. (Surface fault rupture hazard zones are shown on Maps A1 and A2 in the Map Appendix.)

The dam structures included in the Expanded College Lake component of the Local-Only Alternative also could be subject to damage from surface fault rupture, but this impact could be mitigated to a less-than-significant level through engineering design. The College Lake facilities proposed under the Modified Local-Only Alternative could also be damaged by large earthquakes; however, the potential flooding and erosion hazards that could potentially result from such damage would be less adverse than that which would occur under the Local-Only Alternative, which would involve dam structures and increased water storage in the lake.

#### S.7.4 EFFECTS ON AQUATIC HABITAT

Impacts to aquatic habitat would be more adverse under the Local-Only Alternative than under the BMP 2000 Alternative. Spawning and rearing habitat for south-central California coast steelhead is present in the upper reaches of Corralitos Creek, upstream of College Lake. Conditions for steelhead passage to and from spawning and rearing habitats are the primary fish habitat factors potentially affected. The presence of sufficient stream flows for down-migration of smolts is critical. Constructing and operating a water diversion facility in Corralitos Creek would directly affect steelhead spawning and rearing habitat. Implementation of the Expanded College Lake project would impede migration of the species. There is a cumulative effect on flows to Salsipuedes Creek for the various components of the Local-Only Alternative. The EIR identifies measures to reduce these impacts to less-than-significant levels; these measures would reduce the yield of the Local-Only Alternative.

With the Modified Local-Only Alternative, impacts to steelhead would be of lesser magnitude, since there would be no diversion from Corralitos Creek; however, impacts associated with College Lake would still occur.

Although the Murphy Crossing component of the BMP 2000 Alternative also would adversely affect steelhead, it would affect migratory habitat (the Pajaro River), and would not affect spawning or rearing habitat.

The Modified BMP 2000 Alternative would avoid impacts to aquatic habitat and steelhead.

### S.7.5 EFFECTS ON WETLANDS/WATERS OF THE US AND RIPARIAN HABITAT

There are a number of special status species in the project area that are associated with wetlands and riparian habitat, including red-legged frog, Santa Cruz long-toed salamander, western pond turtle, and a number of bird species (refer to **Table 3.4.2**).

Assuming implementation of bore and jack construction at stream and river crossing, impacts to potentially jurisdictional wetlands/water of the US and riparian habitat and wildlife would be significantly reduced under all alternatives. Implementation of the BMP 2000 Alternative potentially would result in disturbance of up to 1.4 acres (0.2 acre for the Import Pipeline, assuming that Pajaro River crossings would be constructed using bore and jack methods, and 1.4 acres for the Murphy Crossing project). Under the Local-Only Alternative, about one acre of potentially jurisdictional wetlands/waters of the US (assuming bore and jack for crossings of Watsonville Slough, Corralitos Creek, and Harkins Slough).<sup>2</sup>

Under the Modified Local-Only Alternative, approximately one-half acre of potentially jurisdictional wetlands/waters of the US would be disturbed, assuming bore and jack crossings of streams.

Under the Modified BMP 2000 Alternative, construction activities would disturb up to 0.2 acre of potentially jurisdictional wetlands/waters of the U.S (Import Pipeline).

### S.7.6 UPLAND SPECIES

One of the largest remaining populations of Santa Cruz tarplant, a species that has been proposed for listing as federally threatened and is currently listed by the State as endangered, occurs on the Watsonville Airport property and likely occurs on the private property to the west of the airport as well. The population at the airport may be important to the survival of the species. Under either the Local-Only Alternative or the Modified Local-Only Alternative there would be direct impacts to Santa Cruz tarplant. Relocating the pipeline alignment to Airport Boulevard would avoid impacts to tarplant, but would result in adverse impacts on traffic and circulation due to the temporary closure of traffic lanes and the subsequent increase in traffic congestion and safety hazards.

Construction of the Import Pipeline (BMP 2000, Modified BMP 2000, and Modified Local-Only alternatives) could disturb sensitive species found in annual grassland habitat. The special status animal species associated with this habitat that have the potential to occur in the study area include the San Joaquin kit fox and western burrowing owl. Direct impacts to the species would be avoided or mitigated through measures identified in the EIR, and no permanent impacts

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<sup>2</sup> PVWMA has committed to implementing pipeline construction techniques (bore and jack) that avoid direct impacts to waterways for crossings of Pajaro River and Watsonville slough (thereby avoiding wetland/waters of the US-related impacts for some components).

would occur. This impact would be associated with all alternatives except the Local-Only Alternative.

### S.7.7 VISUAL QUALITY

The BMP 2000 Alternative and the Modified BMP 2000 Alternative would have less adverse impacts on visual quality than the other alternatives. The BMP and Modified BMP alternatives include the Import Pipeline, which would temporarily disturb lands within the pipeline alignment. Once the pipeline is buried, land within the alignment would be restored to its previous condition, and farming would continue over the pipeline easement in agricultural areas. The Recycled Water Facility, which would result in the most adverse visual quality impacts, would be constructed under all four alternatives. Both the Local-Only and Modified Local-Only alternatives would construct a larger Recycled Water Facility that would include advanced water treatment facilities, as required by Mitigation Measure 5.A.3-4a in Chapter 5. These facilities could increase adverse impacts on views from scenic roads, including Highway 1, Beach Road and San Andreas Road. Additionally, both the Local-Only and Modified Local-Only alternatives would construct the North Dunes Recharge Basin, and the Modified Local-Only Alternative would construct the Southeast Dunes Recharge Basin. The Local-Only Alternative would be considered to result in more adverse visual quality impacts because it would also construct dam structures at College Lake that would be visible from Highway 152 and Holohan Road. The College Lake facilities proposed under the Modified Local-Only Alternative would be smaller in scale and therefore would be less visible.

### S.7.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Based on the comparison presented above, the Modified BMP and BMP 2000 alternatives are environmentally superior to the Local-Only and Modified Local-Only alternatives. The Local-Only Alternative fails to meet the project's primary objective while lessening environmental impacts. The Modified BMP Alternative is environmentally preferable to the BMP 2000 Alternative in that it would reduce or eliminate impacts to aquatic habitat and steelhead, and would have least impact on wetlands/waters of the US and riparian species habitat. The Modified BMP 2000 Alternative includes fewer facilities, and would result in less construction while providing the highest quality source water.

## S.8 ISSUES TO BE RESOLVED

The primary issues to be resolved are the selection of projects to be implemented and a means to fund those projects. The PVWMA Board of Directors is empowered to select the projects to be implemented, once this EIR has been certified as complete and adequate. Depending on the approach selected, PVWMA may need to obtain voter approval before project implementation. Several approaches are under consideration (refer to discussion of Socioeconomic Issues in Chapter 8 of this report).

For a summary of potential areas of controversy regarding implementation of the project, refer to **Table 1.1** in Chapter 1, Introduction. **Table 1.1** summarizes issues raised during the scoping process for this Draft EIR.

**TABLE S.2  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACTS AND MITIGATION MEASURES <sup>a</sup>	BMP 2000 Alternative		Local-Only Alternative			
	4A. Water Recycling	4B. Groundwater Banking	5A. Water Recycling	5B. Expanded College Lake	5C. Corralitos Creek Pinto Lake Diversions	5D. Aquifer Storage and Recovery
<b><u>Land Use and Planning</u></b>						
<b>Impact: Disturbance of adjacent land uses during construction.</b>	LS	LS	LS	SM	LS	LS
▪ Advance notification of construction activities. (Recommended)	✓	✓	✓	✓	✓	✓
▪ Compensate St. Francis Church for relocation of graves.				✓		
▪ Implement measures to reduce traffic, noise, and air quality impacts.	✓	✓	✓	✓	✓	✓
<b>Impact: Loss of Prime Farmland.</b>	SU	--	SU	SU	SU	SU
▪ Remove and store topsoil separately, and replace following construction.				✓		
<b>Impact: Disruption to farming practices during construction.</b>	LS	LS	LS	--	LS	LS
<b><u>Geology, Soils and Seismicity</u></b>						
<b>Impact: Construction could result in erosion and loss of soil resources.</b>	SM	SM	SM	SM	SM	SM
▪ Conform to requirements of the Santa Cruz County Grading Ordinance.	✓	✓	✓	✓	✓	✓
▪ Expose as little new ground surface as possible and leave vegetation cover intact.	✓	✓	✓	✓	✓	✓
▪ Grading activities in non-cropped areas will be limited to the period between April 1 and October 15.	✓	✓	✓	✓	✓	✓
▪ Implement best construction practices at all grading sites.	✓	✓	✓	✓	✓	✓

<sup>a</sup> Impacts and Mitigation Measures are summarized; please see Chapter 4 and 5 for details.

-- Indicates that the impact does not apply  
 SM = Significant and Mitigable  
 SU = Significant and Unavoidable

LS = Less than Significant  
 CBD = Indicates that impact significance cannot be determined without additional design and environmental analysis.  
 ✓ = Indicates to which project components the mitigation measure applies.

**TABLE S.2 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACTS AND MITIGATION MEASURES <sup>a</sup>	BMP 2000 Alternative		Local-Only Alternative			
	4A. Water Recycling	4B. Groundwater Banking	5A. Water Recycling	5B. Expanded College Lake	5C. Corralitos Creek Pinto Lake Diversions	5D. Aquifer Storage and Recovery
<b>Geology, Soils and Seismicity (cont.)</b>						
<ul style="list-style-type: none"> <li>▪ Following construction, loose soils will be removed and all areas will be re-soiled and reseeded.</li> <li>▪ Prepare and implement an inspection and maintenance program for the right-of-way and all facility sites.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Earthquake damage to proposed facilities.</b>	SM	SU	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Conduct geologic investigations and incorporate protective measures into the project design.</li> <li>▪ All facilities will comply with applicable policies and appropriate engineering investigation practices.</li> <li>▪ Comply with DSOD standards where applicable.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Potential damage to facilities as a result of underlying soil properties.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ All facilities will comply with applicable policies and appropriate engineering investigation practices as necessary.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Unstable slopes and slope failure could interfere with construction, operations, or damage facilities.</b>	--	SM	--	SM	--	--
<ul style="list-style-type: none"> <li>▪ A design-level geotechnical report that includes a slope stability evaluation will be completed and stability recommendations implemented.</li> </ul>		✓				

<sup>a</sup> Impacts and Mitigation Measures are summarized; please see Chapter 4 and 5 for details.

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**TABLE S.2 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACTS AND MITIGATION MEASURES <sup>a</sup>	BMP 2000 Alternative		Local-Only Alternative			
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<p><b><u>Geology, Soils and Seismicity (cont.)</u></b></p> <ul style="list-style-type: none"> <li>A detailed hydraulic and scour analysis will be conducted and recommendations will be incorporated into the project design.</li> <li>Periodic inspection of the shoreline area and corrective actions</li> </ul>		✓		✓		
<p><b><u>Hydrology and Water Quality</u></b></p> <p><b>Impact: Affect crop yields and degradation of surface or groundwater quality from irrigation with reclaimed water.</b></p> <ul style="list-style-type: none"> <li>Above-ground irrigation systems will be operated in accordance with relevant regulations and permits.</li> <li>Monitor crop productivity.</li> <li>Implement advanced treatment of recycled water</li> </ul> <p><b>Impact: Recycled water recharge would degrade groundwater water quality.</b></p> <ul style="list-style-type: none"> <li>Implement additional advanced treatment processes at the Recycled Water Facility to avoid significant impacts to water quality.</li> </ul>	SM ✓ ✓ --	--   --	SM ✓ ✓ SM ✓	--   --	--   --	--   --

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<b>Hydrology and Water Quality (cont.)</b>						
<ul style="list-style-type: none"> <li>Locate an additional source of water supply to allow for the blending of recycled water with other (ambient) water.</li> <li>Recommended water quality goal of a maximum of 500 mg/L TDS be maintained at all times.</li> </ul>			✓			
<b>Impact: Expose people and structures to flood hazards.</b>	SM	--	SM	LS	--	--
<ul style="list-style-type: none"> <li>Design facilities to comply with relevant requirements.</li> </ul>	✓		✓			
<b>Impact: Dewatering of shallow groundwater resources and contamination of surface water from construction.</b>	--	SM	--	SM	SM	SM
<ul style="list-style-type: none"> <li>Obtain and implement conditions of an NPDES permit for construction dewatering.</li> <li>Prepare and implement a Storm Water Pollution Prevention Plan.</li> </ul>		✓		✓	✓	✓
<b>Impact: Construction activities could compromise the structural integrity or water quality of active wells.</b>	SM	SM	SM	--	SM	SM
<ul style="list-style-type: none"> <li>Wells will be capped.</li> <li>Correct damage to wells and/or reimburse well owners.</li> </ul>	✓	✓	✓		✓	✓
<b>Impact: Increased erosion and sedimentation, and degradation to water quality during construction.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>Development and implementation of a Storm Water Pollution Prevention Plan (SWPPP).</li> </ul>	✓	✓	✓	✓	✓	✓

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<b>Hydrology and Water Quality (cont.)</b>						
<ul style="list-style-type: none"> <li>▪ Employ standard construction-related water quality management practices.</li> <li>▪ Riparian areas may be avoided entirely by using bore and jack construction. (Mitigation Measure 4.A.4-1a).</li> <li>▪ Implement Standard Protective Measures to Maintain Water Quality and Control Erosion and Sedimentation (Mitigation Measure 4.A.4-1b)</li> <li>▪ Implement revegetation measures developed as part of a revegetation plan approved by CDFG. (Mitigation Measure 4.A.4-1c)</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Change historical water level patterns and pumped discharges, potentially affecting downstream water quality.</b>	--	--	--	LS	--	--
<b>Impact: Surface and groundwater contamination from spills and non-point source runoff of chemicals from the treatment plant.</b>	--	--	--	SM	--	--
<ul style="list-style-type: none"> <li>▪ Prepare a Stormwater Pollution Prevention Plan for the treatment plant.</li> </ul>				✓		
<b>Impact: Without land fallowing, the objectives of the Local-Only Alternative could not be achieved and conditions of overdraft would continue, allowing seawater intrusion to advance inland.</b>	--	--	--	--	--	SM
<ul style="list-style-type: none"> <li>▪ Implement a program to fallow cultivatable farm lands, as needed, to reduce the demand on groundwater.</li> </ul>						✓

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<b>Hydrology and Water Quality (cont.)</b>						
<b>Impact: Increase impermeable surfaces and reduce long-term infiltration at the well pads.</b>	--	--	--	--	--	LS
<b>Impact: Initial operation of injection/extraction wells could adversely affect the receiving surface waters.</b>	--	--	--	--	--	SM
<ul style="list-style-type: none"> <li>▪ All groundwater discharges will be conducted in accordance with NPDES permits.</li> </ul>						✓
<b>Impact: Poor quality surface water could enter the groundwater through injection and adversely affect the groundwater quality.</b>	--	--	--	--	--	SM
<ul style="list-style-type: none"> <li>▪ Compliance with relevant policies.</li> <li>▪ Prepare and implement a monitoring and treatment plan and comply with federal and state drinking water standards.</li> </ul>						✓ ✓
<b>Impact: Groundwater injection/extraction can adversely affect groundwater levels, overlying geologic structures, groundwater flow regimes, and adjacent groundwater aquifers.</b>	--	--	--	--	--	SM
<ul style="list-style-type: none"> <li>▪ Complete hydrogeologic analysis and testing. Conduct technical feasibility studies.</li> </ul>						✓

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<p><b><u>Vegetation, Fish and Wildlife</u></b></p> <p><b>Impact: Impacts to potentially jurisdictional wetlands/waters of the U.S. and streambed during construction.</b></p> <ul style="list-style-type: none"> <li>▪ Implement standard protective measures to maintain water quality and control erosion and sedimentation.</li> <li>▪ Avoid wetlands. If complete avoidance is infeasible, implement measures below.                             <ul style="list-style-type: none"> <li>-- Restore Pajaro River riparian forest.</li> <li>-- Special construction techniques for pipeline stream crossings.</li> <li>-- Locate and design spoil sites so they do not drain directly into the waterways.</li> <li>-- Prepare and implement spill prevention plan for potentially hazardous materials.</li> <li>-- Store equipment and materials at least 50 feet from waterways.</li> <li>-- Provide proper and timely maintenance for vehicles and equipment.</li> <li>-- For unavoidable impacts to coastal riparian forest, develop a revegetation plan approved by CDFG.</li> <li>-- Implement revegetation measures for impacts to riparian forest.</li> </ul> </li> <li>▪ Implement off-site wetland creation and/or enhancement for wetland impacts at Salsipuedes Creek.</li> </ul>	SM	SM	SM	SM	--	SM
	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓
				✓		

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<p><b><u>Vegetation, Fish and Wildlife (cont.)</u></b></p> <p><b>Impact: Temporary impacts to special status animal species habitat during construction.</b></p> <ul style="list-style-type: none"> <li>▪ Avoidance of habitat. If complete avoidance is infeasible, implement measures below.</li> <li>▪ Minimize habitat loss by crossing river on the east side of Highway 1.</li> <li>▪ Avoid disturbance to riparian vegetation.</li> <li>▪ Implement survey, consultation and protection measures for California red-legged frog.</li> <li>▪ Survey and protection of raptor and passerine nesting sites.</li> <li>▪ Implement construction protection measures for steelhead.</li> <li>▪ Implement survey, consultation, and protection measures for special status fish and wildlife species.</li> <li>▪ To protect migrating steelhead, construction in the riparian habitat in the Pajaro River will occur after June 1, and cease before November 1. During construction, all flow in the Pajaro River will be diverted around the zone of construction.</li> <li>▪ Conduct surveys and consultation for, and implement protection measures for, California red-legged frog.</li> <li>▪ Pre-construction surveys within the construction zone will be conducted by a qualified biologist between May 1 and November 1.</li> </ul>	<p>SM</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>SM</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>SM</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>SM</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>SM</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	

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<p><b><u>Vegetation, Fish and Wildlife (cont.)</u></b></p> <ul style="list-style-type: none"> <li>▪ The aquatic structure of the river channel to be disturbed will be documented and monitored for three years following construction to ensure stabilization and restoration.</li> <li>▪ Fence creekside construction boundary to prevent frogs from entering area, and to control siltation and disturbance to riparian habitat. Revegetate following construction.</li> <li>▪ All construction adjacent to riparian vegetation will be regularly monitored to ensure habitat loss is consistent with this assessment.</li> <li>▪ Implement coffer dams.</li> <li>▪ A biological monitor will provide an environmental protection workshop and will be on site at all times when construction takes place in aquatic or riparian habitat.</li> <li>▪ Perform western pond turtle surveys prior to construction.</li> </ul> <p><b>Impact: Impacts to special status plant species.</b></p> <ul style="list-style-type: none"> <li>▪ Take of Santa Cruz tarplant will be avoided by rerouting the pipeline alignment through this area.</li> <li>▪ Where adverse impacts to Santa Cruz tarplant cannot be avoided, develop a revegetation plan approved by CDFG.</li> </ul>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>--</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>--</p>	<p>--</p>	<p>--</p>	<p>--</p>	<p>SM</p> <p>✓</p> <p>✓</p>

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<b><u>Vegetation, Fish and Wildlife (cont.)</u></b>						
<p><b>Impact: Construction facilities could disturb raptors in coastal oak woodland habitat.</b></p> <ul style="list-style-type: none"> <li>▪ Realign the proposed pipeline to the north, outside of the drip line of the oaks.</li> <li>▪ If avoidance is infeasible, conduct construction outside the nesting season.</li> <li>▪ Plant replacement coastal live oak seedlings. Details of the revegetation plan, including coast live oak woodland, will be approved by CDFG.</li> </ul>	--	SM ✓ ✓ ✓	--	--	--	--
<p><b>Impact: Construction facilities at select project sites could disturb sensitive species found in annual grassland habitat.</b></p> <ul style="list-style-type: none"> <li>▪ Conduct pre-construction survey and implement avoidance and protective measures for San Joaquin kit fox.</li> <li>▪ Conduct pre-construction survey and implement avoidance measures during the nesting season for burrowing owl. During the non-breeding season, mitigation procedures would be developed in consultation with the CDFG.</li> <li>▪ Trees with unoccupied nests of other raptor species may only be removed prior to March 1 or after September 1. Requires pre-construction survey and avoidance during the breeding season.</li> </ul>	--	SM ✓ ✓ ✓	--	--	--	--

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<b><u>Vegetation, Fish and Wildlife (cont.)</u></b>						
<p><b>Impact: Operation of the proposed project would reduce streamflows for steelhead passage in Salsipuedes Creek, particularly for down-migrating smolts in the spring months.</b></p> <ul style="list-style-type: none"> <li>▪ Provide minimum bypass flows during the steelhead smolt migration period.</li> <li>▪ Passage for migrating adult and smolt steelhead will be facilitated through the installation of a fish ladder with sufficiently high bypass flow.</li> <li>▪ The intake structure will be designed to ensure that smolts are not entrained.</li> </ul>	--	--	--	SM	SM	--
<ul style="list-style-type: none"> <li>▪ Restore Corralitos Creek riparian forest and include in revegetation plan.</li> <li>▪ Implement standard protective measures to maintain water quality and control erosion and sedimentation.</li> </ul>	--	--	--	--	SM	--
<p><b>Impact: Construction and operation impacts to special status animal species dependent on wetland habitats.</b></p> <ul style="list-style-type: none"> <li>▪ Avoid disturbance to wetland habitat. If wetland habitat will not be entirely avoided, implement Mitigation Measure 5.D.4-2b.</li> </ul>	--	--	--	--	--	SM
						✓

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<p><b><u>Vegetation, Fish and Wildlife (cont.)</u></b></p> <ul style="list-style-type: none"> <li>Implement survey, consultation, and protection measures for California red-legged frog, California tiger salamander, and Santa Cruz long-toed salamander.</li> <li>Survey and protection of raptor and passerine nesting sites.</li> <li>Conduct hydrologic studies for Watsonville Slough. Recommendations made by the study would constitute mitigation.</li> </ul>						<ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> </ul>
<p><b><u>Cultural Resources</u></b></p> <p><b>Impact: Potential impacts to unknown cultural resources at well sites.</b></p> <ul style="list-style-type: none"> <li>Conduct archaeological surveys of well sites.</li> </ul>	SM	--	--	--	--	SM
<p><b>Impact: Impacts to unknown prehistoric and historic cultural resources.</b></p> <ul style="list-style-type: none"> <li>Should any as yet undiscovered cultural resources be encountered, the find will be mitigated according to appropriate guidelines.</li> </ul>	SM	SM	SM	SM	SM	SM
<p><b>Impact: Impacts to identified cultural resources.</b></p> <ul style="list-style-type: none"> <li>Conduct archaeological surveys of the project area.</li> <li>Locate facilities and pipeline alignments away from identified sites. A qualified cultural resource specialist will assist in identifying the extent of important cultural resource sites to be avoided.</li> </ul>	✓	SM	--	SM	SM	SM

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<p><b><u>Cultural Resources (cont.)</u></b></p> <ul style="list-style-type: none"> <li>If important cultural resource sites cannot be avoided, PVWMA will coordinate with agencies in the development of an appropriate mitigation plan.</li> </ul> <p><b>Impact: Potential indirect impacts to cultural resources, primarily vandalism, could result from the increased access to, and use of, the general area during construction.</b></p> <ul style="list-style-type: none"> <li>The resource boundaries should be marked as exclusion zones.</li> <li>Construction supervisory personnel should be notified of the existence of these resources and be required to keep personnel and equipment away from these areas.</li> <li>Monthly monitoring of the cultural resources to be avoided should occur. If damage is detected a guard will be posted to patrol the site and adjacent important resources.</li> </ul>	--	SM	--	SM	SM	SM
<p><b><u>Traffic and Circulation</u></b></p> <p><b>Impact: Temporary increase in traffic during construction.</b></p> <ul style="list-style-type: none"> <li>Schedule truck trips outside of peak commute hours. (Recommended)</li> <li>Use haul routes that minimize truck traffic on local roadways. (Recommended)</li> </ul>	LS	LS	LS	LS	LS	LS
	✓	✓	✓	✓	✓	✓
	✓	✓	✓	✓	✓	✓

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<b><u>Traffic and Circulation</u> (cont.)</b>						
<b>Impact: Wear and tear on area roadways during construction.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Conduct a preconstruction survey of road conditions, monitor during construction, and repair following construction.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Potential traffic safety hazards for vehicles and pedestrians in the construction area.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Traffic safety and control plans to show methods for maintaining traffic flows.</li> <li>▪ Advanced public notification of construction activity and roadway/access closures.</li> <li>▪ Traffic control plans will include detours for bicyclists.</li> </ul>	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓	✓ ✓ ✓
<b>Impact: Project construction would generate a demand for parking spaces.</b>	LS	LS	LS	LS	LS	LS
<b>Impact: Traffic delays for vehicles traveling past the construction zone.</b>	--	SM	SM	--	SM	SM
<ul style="list-style-type: none"> <li>▪ Construction hours will be limited to off-peak traffic periods on commute streets.</li> <li>▪ Traffic control plans to show methods for maintaining traffic flows.</li> </ul>		✓ ✓	✓ ✓		✓ ✓	✓ ✓
<b>Impact: Temporary lack of access to adjacent land uses for both general and emergency access.</b>	--	SM	SM	--	SM	SM
<ul style="list-style-type: none"> <li>▪ Maintain steel trench plates to restore access across open trenches.</li> <li>▪ Request that affected jurisdictions identify detours to be posted by contractor.</li> </ul>		✓ ✓	✓ ✓		✓ ✓	✓ ✓

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<b><u>Traffic and Circulation</u> (cont.)</b>						
<ul style="list-style-type: none"> <li>▪ Notify the appropriate emergency services of the timing, location, and duration of construction activities and the locations of detours and lane closures.</li> </ul>		✓	✓		✓	✓
<b>Impact: Cumulative traffic and roadway disruptions.</b>	--	--	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ The traffic control plan will include consideration of any other planned traffic detours related to nearby and concurrent construction projects.</li> </ul>			✓	✓	✓	✓
<b>Impact: The Expanded College Lake project could conflict with a new Paulsen-Whiting Road bridge connection planned by Santa Cruz County.</b>	--	--	--	LS	--	--
<ul style="list-style-type: none"> <li>▪ Coordinate closely with the Santa Cruz County Public Works Department. (Recommended)</li> </ul>				✓		
<b><u>Air Quality</u></b>						
<b>Impact: Temporary generation of criteria air pollutants during construction.</b>	SM	SU	SM	SU	SU	SU
<ul style="list-style-type: none"> <li>▪ The construction contractor will implement a dust control program.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Operation and maintenance vehicle trips would generate air emissions.</b>	LS	LS	LS	LS	LS	LS
<b>Impact: Construction lane closures and detours could temporarily increase vehicular emissions.</b>	--	LS	LS	--	LS	LS

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**TABLE S.2 (Continued)  
SUMMARY OF IMPACTS AND MITIGATION MEASURES**

IMPACTS AND MITIGATION MEASURES <sup>a</sup>	BMP 2000 Alternative		Local-Only Alternative			
	4A. Water Recycling	4B. Groundwater Banking	5A. Water Recycling	5B. Expanded College Lake	5C. Corralitos Creek Pinto Lake Diversions	5D. Aquifer Storage and Recovery
<b>Noise</b>						
<b>Impact: Construction activities would intermittently and temporarily generate noise.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Incorporate standard noise control measures into contract specifications.</li> <li>▪ Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m., Monday through Sunday.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Operation of proposed project would result in noise increases.</b>	SM	LS	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Incorporate acoustical treatments and/or building enclosures into contract specifications.</li> </ul>	✓		✓	✓	✓	✓
<b>Public Services</b>						
<b>Impact: Construction of could result in disruption to utility services.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>▪ Conduct a detailed study identifying utilities and include utilities considerations in project design. Provide notification of utilities disruption.</li> </ul>	✓	✓	✓	✓	✓	✓
<b>Impact: Construction could temporarily impede access to emergency services, as well as to collection and delivery services.</b>	--	SM	SM	LS	SM	SM
<ul style="list-style-type: none"> <li>▪ Construction trenches will be covered by steel trench plates to allow access.</li> <li>▪ Work with affected jurisdictions (Santa Cruz County or City of Watsonville) to identify detours.</li> </ul>		✓ ✓	✓ ✓		✓ ✓	✓ ✓

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<b><u>Public Services (cont.)</u></b>						
<ul style="list-style-type: none"> <li>Notify emergency services of the timing, location, and duration of construction activities and the locations of detours and lane closures.</li> </ul>		✓	✓		✓	✓
<b>Impact: Construction activities could require short-term police and fire protection services.</b>	--	LS	--	--	--	--
<ul style="list-style-type: none"> <li>Implement traffic mitigation measures. (Recommended)</li> </ul>		✓				
<b>Impact: Pump station operations would increase demand for electrical service.</b>	--	--	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>Design of facilities with substantial electrical demand will be coordinated with PG&amp;E to ensure adequate electricity service is available.</li> </ul>			✓	✓	✓	✓
<b><u>Visual/Aesthetic and Recreation Resources</u></b>						
<b>Impact: Development of the project would alter the visual character of, and views of, the project area.</b>	SM	SM	SM	SM	SM	SM
<ul style="list-style-type: none"> <li>Revegetate disturbed natural areas to minimize textural contrasts.</li> <li>Use design elements to enhance visual integration of the project.</li> <li>Restore disturbed areas to their pre-project condition.</li> </ul>	✓ ✓ ✓	✓	✓ ✓ ✓	✓ ✓	✓ ✓ ✓	✓ ✓ ✓

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<p><b><u>Visual/Aesthetic and Recreation Resources (cont.)</u></b></p> <ul style="list-style-type: none"> <li>Restore the topography of disturbed areas to a visually unobtrusive condition.</li> <li>Submit a revegetation plan to CDFG.</li> </ul> <p><b>Impact: Development of the proposed pipeline would temporarily disrupt recreational uses along designated recreational bicycle trails and reduce the aesthetic quality of bicycle recreation.</b></p> <p><b>Impact: The project could introduce new sources of light and increase ambient light.</b></p> <ul style="list-style-type: none"> <li>Position lighting to prevent glare. If necessary, landscaping will be provided. Highly reflective building materials and/or finishes will not be used. (Recommended)</li> </ul> <p><b><u>Change in Place of Use</u></b></p> <p><b>Impact: Potential indirect effect: future land use changes (e.g., conversion of native lands).</b></p> <ul style="list-style-type: none"> <li>CEQA compliance required for future water service.</li> <li>Endangered Species Act compliance required for future water service on native lands.</li> </ul> <p><b><u>Growth Inducement Potential</u></b></p> <p><b>Impact: Project would accommodate future growth and indirectly results in secondary impacts.</b></p>		<p>✓</p> <p>✓</p> <p>LS</p> <p>LS</p> <p>✓</p> <p>--</p> <p>SM/SU</p>	<p>LS</p> <p>LS</p> <p>✓</p> <p>SM</p> <p>✓</p> <p>SM/SU</p>	<p>LS</p> <p>LS</p> <p>✓</p> <p>SM/SU</p> <p>SM/SU</p>	<p>LS</p> <p>LS</p> <p>✓</p> <p>SM/SU</p> <p>SM/SU</p>	<p>LS</p> <p>LS</p> <p>✓</p> <p>SM/SU</p> <p>SM/SU</p>

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<p><b><u>Growth Inducement Potential (cont.)</u></b></p> <ul style="list-style-type: none"> <li>▪ Responsible agencies have authority to implement mitigation.</li> </ul>	✓	✓	✓	✓	✓	✓

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