

# CHAPTER 8

## IMPACT OVERVIEW

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### **8.1 SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED**

In accordance with Section 21083 of the California Environmental Quality Act (CEQA), and with Sections 15064 and 15065 of the State CEQA Guidelines, the purpose of this section is to identify impacts that could not be eliminated or reduced to a less-than-significant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapters 4 and 5. The findings of significant impact are subject to determination by PVWMA's Board of Directors as part of its determination process for the EIR. This section in the Final EIR will be revised, if necessary, to reflect the PVWMA Board of Directors' findings. This EIR identifies the following significant unavoidable adverse impacts that would result from implementation of the BMP 2000 Alternative and/or Local-Only Alternative:

#### Permanent Loss of Prime Agricultural Land

- BMP 2000 Alternative – Recycled Water Facility
- Local-Only Alternative – Recycled Water Facility
- Local-Only Alternative – Expanded College Lake
- Local-Only Alternative – Corralitos Creek Diversion
- Local-Only Alternative – Aquifer, Storage and Recovery

#### Construct Facilities Across Active Fault Traces

- BMP 2000 Alternative – Import Pipeline

#### Daily Emissions of Criteria Air Pollutants (PM<sub>10</sub>) in Excess of Monterey Bay Unified Air Pollution Control District Standards

- BMP 2000 Alternative – Groundwater Banking (Import Pipeline)
- Local-Only Alternative – Expanded College Lake
- Local-Only Alternative – Corralitos Creek and Pinto Lake Diversions
- Local-Only Alternative – Aquifer, Storage and Recovery
  
- Secondary Effects of Growth Accommodated by the Project (both alternatives)

Please refer to Chapters 4, 5 and 7 for detailed discussion of these significant unavoidable impacts.

Some of the measures identified to mitigate impacts would prolong the construction schedule by restricting either the time of day (for traffic mitigation measures) or the time of year (restrictions for grading and for special status species) during which construction could occur. In some cases, this attenuation of the construction schedule offset by construction techniques (i.e., multiple crews for pipeline construction).

## 8.2 CUMULATIVE IMPACTS

### 8.2.1 APPROACH TO ANALYSIS

For impacts related to secondary effects of growth potentially induced by the project, refer to Chapter 7. Examples of secondary effects of growth include the traffic and air quality impacts caused by future development that would occur in the PVWMA service area.

A cumulative impact is created as a result of the combination of the projects evaluated in an EIR together with other projects causing related impacts. The purpose of this analysis is to disclose significant cumulative impacts resulting from implementation of the BMP 2000 Alternative or Local-Only Alternative in combination with other projects or conditions, and to indicate the severity of the impacts and their likelihood of occurrence. The CEQA Guidelines require that EIRs discuss the cumulative impacts of a project when the project's incremental effect is "cumulatively considerable," meaning that the project's incremental effects are considerable when viewed in connection with the effects of past, current, and probable future projects. According to the CEQA Guidelines, a project's contribution to a significant cumulative impact may be determined to be *de minimis*, and thus not significant, if the environmental conditions would essentially be the same whether or not the proposed project is implemented.<sup>1</sup> This analysis considers projects that are reasonably foreseeable and that could have cumulative effects in combination with the BMP 2000 or Local-Only Alternatives.

### 8.2.2 POTENTIAL PROJECTS WITH RELATED OR CUMULATIVE EFFECTS

**Table 8.1** lists the projects that were considered in the evaluation of cumulative impacts. These projects were identified by the City of Watsonville Community Development Department, the Monterey County Planning and Building Inspection, and the planning departments of Santa Cruz County, San Benito County, and Santa Clara County. This evaluation considers cumulative impacts related to all components of the BMP 2000 and Local-Only Alternatives based on the geographic scope of the affected environmental resource.

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<sup>1</sup> CEQA *Guidelines* Section 15130.

**TABLE 8.1  
PLANNED AND APPROVED PROJECTS IN THE PROJECT AREA AND VICINITY**

Project	Status
<b>Santa Cruz County</b>	
99-unit Pajaro Lane Affordable Housing Project	Approved
60-unit affordable housing apartment complex with commercial uses and a child care center on Freedom Boulevard	Pending
<b>Northern Monterey County</b>	
17-lot residential subdivision on Salinas Road	Pending
6-unit Tanglewood subdivision	Pending
Pajaro Valley Golf Course expansion	Pending
Agricultural distribution center expansion (72,000 to 195,000 square feet)	Pending
<b>Northwestern San Benito County</b>	
140-unit Rancho Larios residential subdivision	Approved
15-unit Highland Meadows residential subdivision	Approved
<b>City of Watsonville</b>	
140-unit Sunset Cove residential subdivision	Under Construction
114-unit Bay Breeze residential subdivision	Approved
390-unit Vista Montana residential development	Approved
Pajaro Valley Unified School District high school	Approved; Appeal Pending
16-unit residential subdivision on Airport Blvd.	Approved
27,405 square-foot industrial building complex at 547 Airport Blvd.	Approved
300-unit Seaview Ranch residential subdivision	Pending
16-unit townhouse development at 108 Green Valley Road	Pending
16 affordable housing units at 55 Ross Avenue	Approved
Home Depot store	Pending
<hr/> <p>SOURCES: Boyle, 2001; Monterey County Planning and Building Inspection website (<a href="http://www.co.monterey.ca.us/pbi/index.htm">http://www.co.monterey.ca.us/pbi/index.htm</a>)</p> <hr/>	

### 8.2.3 IMPACTS AND MITIGATION MEASURES

Both the BMP 2000 and Local-Only Alternatives would result in land use compatibility, noise, air quality, traffic, and visual quality impacts during construction. These impacts, in combination with other development projects listed in **Table 8.1**, would contribute to cumulative construction impacts in the PVWMA service area. These would be temporary impacts. Construction of the project components would be contingent on the issuance of permits from local agencies. Through the permitting process, construction projects near the BMP 2000 or Local-Only Alternative projects would be identified and coordinated to avoid conflicts.

As stated in Chapter 2, Project Description, either the BMP 2000 or Local-Only Alternative is expected to be fully implemented within 10 years, with construction of various project components staggered throughout the 10-year period. It is not known whether the timing of any of the planned projects listed in **Table 8.1** would coincide with construction of components under the BMP 2000 or Local-Only Alternatives. If project construction did happen simultaneously, impacts would fall within the categories of temporary environmental impacts related to increased truck and worker traffic as well as increased noise and air emissions, and increased sedimentation to local waterways. Construction impacts are expected to be mitigable to a less-than-significant level through the standard measures identified in this EIR (e.g., preparation of Stormwater Pollution Prevention Plans and traffic control plans), with the exception of PM<sub>10</sub> emissions, which likely will be significant and unavoidable for many of the projects listed in **Table 8.1**.

The schedules of construction projects frequently change due to various factors (e.g., permit processing, project funding). PVWMA will coordinate with the appropriate departments of the City of Watsonville, Santa Cruz County, Monterey County, San Benito County, and Santa Clara County regarding the timing of construction projects that would occur near BMP 2000 Alternative or Local-Only Alternative project sites. Such coordination will help to minimize multiple disruptions to the same areas. The PVWMA will also submit plans related to, and comply with the requirements of, encroachment permits, which will provide further opportunity for coordination of multiple projects.

The following discussion addresses long-term cumulative impacts associated with operation of the BMP 2000 Alternative and/or Local-Only Alternative.

### Land Use

Construction of the components proposed under the BMP 2000 and Local-Only Alternatives would contribute to the cumulative loss of prime farmland in the PVWMA service area. The geographic area for consideration of cumulative impacts is the PVWMA service area. **Table 8.2** identifies the acreage of prime farmland that would be removed from production under the BMP 2000 and Local-Only Alternatives. For the BMP 2000 Alternative, construction of the Recycled Water Facility would result in the permanent conversion of approximately eight acres of prime farmland adjacent to the existing WWTF. The Import Pipeline would disrupt agricultural operations along the alignment temporarily during construction, but would not result in a permanent conversion of agricultural land. For the Local-Only Alternative, the Recycled Water Facility, Expanded College Lake, Corralitos Creek Pump Station, and Aquifer, Storage and Recovery components would result in the permanent conversion of approximately 42 acres of prime farmland. The Local-Only Alternative also would require the fallowing of more than 2,200 acres of irrigable prime farmland (refer to discussion under Impact 5.D.3-1).

The conversion of agricultural lands under the proposed alternatives would contribute to the cumulative loss of agricultural lands throughout the PVWMA service area, a significant and unavoidable impact. The total amount of prime agricultural land that would be lost due to the

**TABLE 8.2**  
**ACREAGE REMOVED FROM AGRICULTURAL PRODUCTION**

Project Component	Prime Farmland Removed from Production (acres)	
	BMP 2000 Alternative	Local-Only Alternative
Recycled Water Facilities	8	19 <sup>a</sup>
North Dunes Recharge Basin		4.5
Pipeline construction	Temporary disruption of land uses along pipeline route	Temporary disruption of land uses along pipeline route
Supplemental wells	0.5	--
Expanded College Lake	--	16
Corralitos Creek Pump Station	--	0.06
Aquifer Storage and Recharge Facilities	--	1.5
Watsonville Filtration Facility		0.5
<b>Subtotal, Facilities Only</b>	<b>8.5</b>	<b>41.56</b>
Farm Reservoirs <sup>b</sup>	--	Unknown
Land Fallowing	--	2,200+

<sup>a</sup> Reflects acreage required for advanced treatment.  
<sup>b</sup> No information is available on this component; consequently, its impacts cannot be analyzed.

projects listed in **Table 8.1** is unknown. The BMP 2000 and Local-Only Alternatives' contribution to this cumulative effect is considered cumulatively considerable. No mitigation is available for this impact.

### **Geology, Soils and Seismicity**

Construction of the projects listed in **Table 8.1** and the BMP 2000 Alternative or the Local-Only Alternative would result in potentially significant short-term cumulative erosion hazards. As a major construction project in the Pajaro Valley, the selected alternative would be one of the major sources of short-term erosion combined with that of the other projects. Implementation of erosion and sedimentation control measures (specified in Sections 4.A.3, 4.B.3, 5.A.3, 5.B.C, 5.C.3, and 5.D.3) would reduce the project's contribution to this cumulative impact to a less-than-significant level.

Construction of the planned and approved residential development projects listed in **Table 8.1** would result in the exposure of residents to the earthquake hazards of the region. This long-term impact is significant given the large population increase anticipated for both the service area and the region as a whole.

### **Hydrology and Water Quality**

Construction of the planned and approved projects and the selected alternative would result in potentially significant short-term cumulative soil erosion, sedimentation, and construction-related contaminant accumulation and runoff. Project construction would be the major new source of potential water quality degradation because unmanaged, silt and other contaminants from the cumulative impact area could be transported by surface water into surface streams, sloughs and the Pajaro River. Best Management Practices such as revegetation and stabilization of construction areas would control and eliminate the sources of sedimentation and surface water contaminants. Implementation of the measures cited above under Geology, Soils and Seismicity would reduce the project's contribution to this cumulative impact to a less-than-significant level.

The draft Revised BMP identifies a number of watershed management issues, which are addressed below in the context of cumulative hydrology and water quality impacts. Refer to Section 3.4 in the draft Revised BMP for additional information.

### ***Recharge***

Cumulative development in the Pajaro River watershed would increase impermeable surfaces thereby decreasing surface infiltration, decreasing groundwater recharge from natural streams and altering natural drainage by conveying and redirecting stormwater flows.

Section 3.3, Regional Setting—Hydrology and Water Quality, describes groundwater recharge characteristics in the region (page 3.3-3). **Figure 3.3-2** indicates the areas underlain by clays of very low permeability. These clay layers inhibit deep percolation through much of the central and western portions of the watershed, whereas the deeper aquifers rely on surface water infiltration and rainfall in the eastern portions of the watershed. Implementation of development projects in the eastern portion of the watershed that would displace undeveloped lands and agriculture would increase impervious surface areas and decrease infiltration and recharge. Neither the BMP 2000 nor Local-Only alternative would increase impervious surfaces in the eastern portion of the watershed due to the limited ground area covered by the required facilities. In effect, implementation of either alternative would actually facilitate recharge by decreasing groundwater withdrawal while providing alternative surface water sources. PVWMA recognizes the protection of areas serving to recharge the groundwater aquifers as critical to ensuring reliable, long-term water supplies. The draft Revised BMP indicates that basin-wide management measures could be implemented to enhance groundwater stability and groundwater equilibrium within the basin through the protection of key areas of recharge, and identifies implementation of a public outreach program as an initial step toward protecting groundwater recharge areas.

Existing surface water diversions in the watershed are estimated at 2,100 acre-feet per year--approximately 1,000 afy by farmers and 1,100 afy by the City of Watsonville at the Corralitos Creek Filter Plant. None of the projects listed in **Table 8.1** directly involve increases in surface water diversions. The City of Watsonville has initiated a feasibility study to evaluate treating water from Corralitos Creek year-round and examining opportunities for current and future expansion of the Corralitos Creek Filter Plant's treatment capacity, as well as increasing the capacity of the intake pipelines. As part of the City's project, they will be designing a screening system for the intakes. Increasing diversions from Corralitos Creek could reduce the quantity of water recharged to the groundwater aquifers (Watsonville, 2001). This project has recently been initiated and, consequently, impacts to Corralitos Creek cannot be fully characterized at this time.

The Local-Only Alternative includes proposed diversions from Corralitos Creek, Pinto Lake drainage channel and College Lake, reducing flows into Salsipuedes Creek. Implementing measures to protect steelhead (minimum bypass flows), would reduce the project's effects on reducing surface water flows and surface water recharge. The draft Revised BMP recommends that PVWMA develop a monitoring program to track and meter all surface water diversions to gain a full understanding the basin's response to such diversions, which would enable the agency to efficiently and equitably manager water supply in the basin.

### ***Water Quality***

Overall, the proposed project is beneficial to the water quality within the Pajaro Basin because essentially, it reduces groundwater extraction from the critical aquifers, allows the groundwater levels to increase, and establishes a barrier to inhibit seawater intrusion. Without this project, cumulative development in the basin area would continue to tax the aquifers, reduce groundwater levels, and degrade groundwater quality by allowing seawater to intrude into the fresh groundwater resources.

Section 3.3 generally describes existing conditions of nitrate contamination in the groundwater basin. Although correcting existing groundwater degradation from nitrate contamination is not an explicit objective of the projects evaluated in this EIR, the draft Revised BMP indicates that more detailed monitoring is necessary to better understand the extent of the contamination, and proposes the formation of a cooperative effort with Monterey, Santa Cruz, and San Benito counties to increase monitoring in the groundwater aquifers in the groundwater basin. Methods to control nitrate contamination in the Pajaro Basin could be developed over time to include altering cropping patterns to increase nitrate uptake at the surface. The specific water quality issues associated with implementing the Local-Only Alternative are addressed in Chapter 5; implementation of measures specified in Chapter 5 (advanced treatment) would reduce that alternative's contribution to nitrate loading in the groudwater basin to a less-than-significant level. In addition, increasing groundwater levels to reduce seawater intrusion could serve to limit vertical downward migration of high-nitrate groundwater from the surface sources.

Section 3.3—Regional Hydrology and Water Quality presents a discussion of surface water quality, as related to Total Maximum Daily Loads (TMDLs). As described therein, Monterey Bay south, Watsonville Slough and segments of the Pajaro River are designated as impaired water bodies for several pollutants (see **Table 3.3.5** in that section) by the California State Water Resources Control Board. In the future, the TMDLs will be used to initiate basin-wide corrective actions to reduce pollutant loading to impaired water bodies from non-point source pollutants including pesticides, metals and sediment..

### **Vegetation and Wildlife Habitat**

Approved and planned development would result in the disturbance of a significant amount of natural vegetation and wildlife habitat in the PVWMA service area and its vicinity. Construction of the proposed facilities under the BMP 2000 Alternative or the Local-Only Alternative would contribute significantly to these impacts. PVWMA has committed to implementing bore and jack construction at pipeline crossings of the Pajaro River and Watsonville Slough, thereby avoiding direct impacts to riparian and aquatic habitat at those locations. Implementation of the Local-Only Alternative would incrementally contribute to the cumulative permanent loss of wetlands/waters of the U.S. as well as loss of riparian habitat due to the Expanded College Lake and Corralitos Creek diversion projects. Implementation of off-site wetland creation and/or enhancement for permanent loss of wetlands from construction in Salsipuedes Creek (Expanded College Lake, Measure 5.B.4-1c) and restoration of the riparian forest along Corralitos Creek (Measures 5.C.4-1a and 5.C.4-1b) would reduce the project's contribution to this cumulative impact to a less-than-significant level.

The project would contribute incrementally to the cumulative losses of more common habitats in the project area, notably agricultural lands and grassland. Most of the pipeline alignments and other construction areas could be recolonized by native species, although trees likely would be removed from pipeline alignments during regular maintenance to keep rights-of-way clear.

### **Water Resources and Aquatic Habitat**

The combined operation of the Corralitos Creek, Pinto Lake, and College Lake diversions will reduce streamflows in downstream portions of Salsipuedes Creek and the Pajaro River. Although the combined operation of these three water diversions would result in reduced winter flows downstream of the diversion sites, the cumulative impact on steelhead migration is considered less than significant since minimum bypass flows have been established for the Salsipuedes Creek below the Corralitos Creek confluence. Compliance with all minimum flow criteria will ensure that sufficient downstream flows are maintained regardless of the amount of water diverted at each of the withdrawal sites. No additional mitigation is required.

As discussed above under Hydrology and Water Quality, the City of Watsonville is proposing to screen its diversion at Corralitos Creek to reduce impacts to fisheries. While screening the intake would have a beneficial effect on aquatic resources, the City may also increase diversions from Corralitos Creek. The cumulative effects of the diversion from Corralitos Creek proposed under

the Local-Only Alternative and the increased diversion that the City may pursue cannot be determined until the City's proposed project is further developed.

### **Visual Impacts**

Implementation of the components proposed under the BMP 2000 or Local-Only Alternative could, in conjunction with other projects, adversely affect the existing visual character of the project area. The geographic scope of cumulative impacts to visual quality are the viewsheds that could be affected by project implementation, specifically, the views from designated scenic routes identified in Section 3.10 (State Highways 1, 129, and 152; U.S. Highway 101; and Beach Road, San Andreas Road, Airport Road, and Holohan Road).

As discussed in Section 4.A.10, the Recycled Water Facility site is located next to the WWTF on flat, open agricultural land with nearby development limited to scattered farmhouses and agricultural buildings. The only development planned for this area west of Highway 1 is the proposed high school listed in **Table 8.1**. The clearwell storage tanks, together with the proposed high school development, could result in a cumulatively considerable visual impact that would affect views from Highway 1, Beach Road and San Andreas Road by incrementally increasing the presence of urban and industrial structures into a rural agricultural landscape. This would be a significant impact. However, the proposed facility would be constructed adjacent to the existing WWTF, so it would expand, not introduce, an industrial feature in the rural landscape. Measures 4.A.10-1a through 4.A.10-1c would minimize visual contrast of the facilities with the surrounding rural landscape.

The Expanded College Lake, Corralitos Creek Pump Station, and Aquifer Storage and Recovery Facilities under the Local-Only Alternative would involve construction of dams and pumping, filtration, and diversion facilities. The Expanded College Lake facilities would be visible from Highway 152 and Holohan Road, both of which are designated scenic roads. However, they would be viewed in the context of surrounding urban development, and given their size and location, they would not be considered to have cumulatively considerable visual impacts. The Corralitos Creek Diversion and ASR facilities would be relatively unobtrusive and would not result in cumulatively considerable visual impacts.

## **8.3 SOCIOECONOMIC EFFECTS**

While economic or social effects per se are not to be treated as significant effects on the environment under CEQA, the Guidelines state that economic and social information may be included in an EIR or may be presented in whatever form the agency desires. The following discussion provides an overview of potential socioeconomic impacts that could result from implementation of the BMP 2000 or Local-Only Alternative and is presented for informational purposes.

### 8.3.1 PROJECT COST AND FUNDING

There are a number of possible costing structures that could be adopted to finance the selected project alternative. The PVWMA Board of Directors will determine the cost structure to be implemented. Depending on the structure selected, PVWMA may need to obtain voter approval before implementation. Until a final cost structure is adopted, specific socioeconomic impacts cannot be determined. However, it is possible to predict in general terms the socioeconomic impacts that could result from the project.

**Table 8.3** indicates the estimated costs of the Local-Only and BMP 2000 Alternatives, and shows that the total annual costs for these two alternatives are similar. The BMP 2000 would involve higher capital costs, for constructing the Import Pipeline and associated facilities, whereas the Local-Only Alternative would involve higher operating and maintenance costs because of the annual leasing of land to be fallowed. These costs do not include the cost of implementing the mitigation measures identified in this EIR. For example, these costs do not reflect the addition of advanced treatment processes that would substantially increase both the capital and operating costs of water recycling under the Local-Only Alternative.

The PVWMA projects that have been or are currently being implemented, Harkins Slough and the Coastal Distribution System, are being financed by two components: the water sales or delivery charge, and the PVWMA augmentation charge. In addition to these existing strategies, debt funding will be required to finance all of the capital expenditures involved with the major project components. Federal and state grants and low interest loans will be used to the extent possible. The PVWMA financial strategy will optimize the different revenue and debt funding sources to minimize the financial impacts on the Basin residents.

PVWMA will need to recover approximately up to \$14.6 million annually from its water users. PVWMA is currently undertaking a study to evaluate the revenue requirements necessary to finance the various projects. The goal of the study is to develop a stable revenue stream to fund the capital debt and operating costs of the proposed facilities. Accomplishing this goal requires compliance with the law as well as meeting the financial needs of local farmers and other water users. The study is seeking to identify the appropriate and legal distribution of costs, recognizing the varying degrees of benefits and costs involved. The study is evaluating the appropriate allocation of costs and benefits, taking into account such issues as zones of benefit and zones of responsibility, and considering potential rate structures. The revenue stream ultimately could stem from a rate structure of fixed charges, assessments on land, flat price rates (levying the same price per acre-foot on all water sales), tiered or volumetric rates (levying higher costs for using more water), and various combinations of water rates and land assessment. The study also is examining legal and regulatory mechanisms for implementing the revenue plan, potentially including the use of ordinances, contracts, assessments, or any combination thereof. Numerous combinations are being evaluated in order to develop a funding program that will meet the goals

**TABLE 8.3  
COSTS ASSOCIATED WITH THE LOCAL-ONLY  
AND BMP 2000 ALTERNATIVES**

	Local-Only Alternative	BMP 2000 Alternative
Capital Costs of Facilities	\$128 million <sup>a</sup>	\$162 million <sup>a</sup>
Annual Operating and Maintenance Costs	\$6.6 million <sup>b</sup>	\$4.4 million
Adjusted Total Annualized Costs <sup>c</sup>	\$14.6 million	\$14.5 million

- <sup>a</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.
- <sup>b</sup> The way that land fallowing would probably occur is that PVWMA would take out annual leases on the land to be fallowed. The cost of leases is expected to run from \$1,000 to \$2,000 per acre annually, and is added in to annual operation and maintenance costs.
- <sup>c</sup> The adjusted annualized costs include annualized capital cost, operations and maintenance costs, and delivery charge.

SOURCE: draft Revised BMP, August 2001.

of financing project implementation while maintaining the economic integrity of the agricultural community and municipal and industrial users. In order for the project to be financially feasible, the revenues generated will have to be reliable and stable. Future investors in the project (bondholders) will want assurances that their investment will be repaid in full.

### **Tiered Water Pricing**

As noted above, tiered water pricing is being evaluated as a rate structure that may apply to any of the project alternatives. (Due to the level of water conservation that would be required for the Local-Only Alternative, it is assumed this alternative definitely would require tiered pricing; PVWMA also is currently investigating the greater implications associated with a tiered pricing plan for this alternative.) Tiered water pricing is a management mechanism that can promote conservation and/or alter water use practices. Tiered pricing can encourage additional water conservation through simple market forces and can promote conversion to crops that use less water. Crops such as apples and other deciduous crops have a low application rate and would fall into the lowest pricing tier while crops with higher application rates such as strawberries and raspberries would fall into the higher tiers. Under the tiered structure, conservation is promoted by potential cost savings. This option could be utilized to reduce water use if construction of additional water supplies is either too costly or not feasible.

### 8.3.2 SETTING

As described in Section 3.1, Land Use, agriculture is the predominant land use in the Pajaro Valley, and much of the agricultural land in the valley meets the criteria for prime and unique farmland.<sup>2</sup> Farms in the Pajaro Valley produce high-revenue crops, many of which can be grown in only a few other areas of California or the United States (PVWMA, 1993). Small farms and owner-operated farms are common (PVWMA, 1993). While data showing the percent of rented acreage versus that owned by growers are not readily available, a 1998 study of socioeconomic impacts concluded that the majority of acreage in the valley is rented (M.Cubed, 1998).

### 8.3.3 POTENTIAL SOCIOECONOMIC EFFECTS

#### ***BOTH ALTERNATIVES***

According to an analysis of the impact of augmentation charges on farm production costs and net returns to land and management conducted for the PVWMA (M.Cubed, 1998), an increase in the cost of water would likely have the following effects:

- The increase in water costs would result in a modest to negligible increase in unit production costs. The 1998 study noted, however, that for operations with a small profit margin, even a minor increase in unit production can result in a non-negligible change in net income.
- Initially, assuming no adjustments in farm operations or the land rental market, the effects of increased water costs would be a net decrease in returns to land and management (that is, the amount of revenue available for rent and management expenses after all other expenses have been paid). The decrease in net return would be three to four times higher for the vegetable rotation that was evaluated than for strawberry production, due to the much narrower profit margins for vegetables compared to strawberries. These initial impacts, especially to vegetable producers, are not expected to be sustainable, and would lead to adjustments in production and in rental markets.
- On-farm adjustments such as water conservation would significantly mitigate the impacts to net returns if water savings could be realized at low cost. According to the 1998 study, discussions with farm managers suggested that a 15 percent improvement in irrigation efficiency was “highly feasible” (M.Cubed, 1998). Because metering of wells and an augmentation charge program have previously been instituted, however, it is likely that the most-easily implemented or most cost-effective conservation measures have already been implemented by many of the Valley’s water users. On the other hand, because the size of the current augmentation charge has been limited it is also likely that additional water conservation measures are quite feasible for many valley growers.
- Over time land rental rates would be adjusted to reflect the lower grower profit potential due to increased water costs. The 1998 analysis indicated that a 10 percent reduction in the baseline average rents would reduce impacts to net returns by approximately 50 percent under the local-import option that was evaluated in that study.

<sup>2</sup> For a description of criteria for designating agricultural land refer to Section 3.1.

- Impacts to net returns would not be evenly distributed. Impacts would be greatest for marginally profitable operations, while larger-scale operations would be expected to be more able to absorb the additional costs. In addition, impacts would be less for growers that are able to minimize production costs; consistently achieve above-average yields; and produce high quality produce and command a price premium. Thus, some marginally profitable farms could fail, and other agricultural operations would either shift to more profitable crops or less water intensive crops, or both.
- Although some reduction in local economic activity would occur, because agricultural income previously reinvested in the region would be diverted to import engineering and construction services or water supply development, the regional impacts of an augmentation charge would not be substantial.

### ***BMP 2000 ALTERNATIVE***

Facilities required for this alternative would take approximately eight acres of agricultural land out of production (see **Table 8.2**). This alternative meets a fundamental goal of PVWMA to eliminate the existing and projected shortfall of water supply without fallowing productive agricultural land. Because the total cost of the BMP 2000 Alternative is similar to the total annual costs of the Local-Only Alternative, the increase in water costs will be similar for both. The potential impacts of the BMP 2000 would be similar to those discussed above.

### ***LOCAL-ONLY ALTERNATIVE***

As discussed above, total annual costs for this alternative would be similar to the BMP 2000 Alternative, due in part to the cost for PVWMA to seasonally lease the land that would need to be fallowed (approximately \$1,000 to \$2,000 per acre annually). Therefore, the impacts of increased water costs alone would be similar to those described above for both alternatives.

As shown in **Table 8.2**, facilities required for this alternative would permanently remove a significantly greater amount of agricultural land from production. More significantly, because this alternative would fail to meet existing water demand, land would need to be taken out of production to meet the central objectives of PVWMA of avoiding or mitigating the adverse impacts of overdraft and seawater intrusion. As discussed under Impact 5.D.3-1 (Section 5.D), more than 2,200 acres of land would need to be fallowed under the Local-Only Alternative. This represents over 7.3 percent of the land in agricultural production in the Pajaro Valley.

Therefore, in addition to the impacts of increased water cost, taking such a substantial amount of prime agricultural land out of production would have impacts that would ripple through the local and regional economy. Land fallowing would result in the loss of agriculture jobs and reduction in agricultural revenues locally, leading to reduced demand for non-agricultural goods and services with a corresponding decrease in revenues and employment in other sectors of the valley economy. Considering the high value of Valley agricultural lands, the removal of a significant amount of land from production likely would be felt well beyond Pajaro Valley.

The Local-Only Alternative also includes the use of farm reservoirs for percolation. Because details on this component have not been developed, it is not evaluated in this EIR. However, construction of farm reservoirs are also likely to entail (at least a seasonal) loss of additional agricultural acreage.

#### **8.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED**

The California Environmental Quality Act (CEQA) states that impacts associated with a proposed project development may be considered to be significant and irreversible if:<sup>3</sup>

- The project would involve a large commitment of non-renewable resources (such as fossil fuels or lumber).
- The primary and secondary impacts of a project would generally commit future generations to similar uses (such as a highway improvement that provides access to a previously inaccessible area).
- The project involves uses in which irreversible damage could result from potential environmental accidents associated with the project.

Construction of the BMP 2000 or Local-Only Alternatives would result in short-term but irretrievable and irreversible commitment of natural resources through direct consumption of fossil fuels and through use of materials for construction. These short-term uses would not be significant.

Implementation of either the BMP 2000 or Local-Only Alternatives would not commit future generations to undesirable uses. The alternatives would not involve uses that could involve accidents that could cause irreversible damage.

Both alternatives would improve the water resources of the region in the long term.

#### REFERENCES – Impact Overview

City of Watsonville, Request for Proposals, Filter Plant Upgrade Feasibility Study and Preparation of Plans and Specifications for Surface Water Intakes, June, 2001.

M Cubed, Pajaro Valley Water Supply Augmentation Fees; An Analysis of Impacts to Costs and Net Returns to Production for Selected Corps, April 1988.

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<sup>3</sup> CEQA Guidelines Section 15126.2(c).