

Pajaro Valley Water Management Agency

Background

The Pajaro Valley Water Management Agency (PVWMA) is responsible for the oversight of private wells located in the Pajaro Valley and uses meters to track water use. It is responsible for the agricultural water use in the Pajaro River basin. The service area encompasses approximately 79,600 acres, including irrigated agricultural lands, native and non-irrigated lands, the City of Watsonville and unincorporated urban communities.

PVWMA is a state-chartered local agency established in 1984 by voters of the Pajaro Valley and the California State Legislature. The agency is responsible for efficient management of water resources for agricultural, municipal and industrial uses within the Pajaro Valley Basin. Its area spans portions of three counties: Santa Cruz, Monterey and San Benito. The agency was formed so that water resources could be under local management and control. The agency is governed by a seven-member board of directors, all of whom are voters in the area served by the agency. Based upon Farm Bureau recommendations, one director each is appointed by the Boards of Supervisors of Monterey and Santa Cruz counties and the City of Watsonville. Four additional directors are elected at large by voters for four-year terms.

The agency is currently revising and updating its plans and general reports. They are also conducting an Environmental Impact Report.

Sources

California Environmental Protection Agency, State Water Resources Control Board, Water Quality, www.swrcb.ca.gov/funding/prop13.html, September 28, 2004.

City of Watsonville Public Works personnel.

PVWMA personnel.

PVWMA Board meeting minutes, May 2005.

PVWMA Revised Basin Management Plan, February 6, 2002.

PVWMA Water Conservation Report, 2000.

PVWMA web site, www.pvwma.dst.ca.us.

Register Pajaronian, "Coastal commission certifies PVWMA's plan," Daniel Lopez, February 22, 2005.

Register Pajaronian, "PVWMA receives \$23 million grant," May 2005.

RMC, Inc., 2002 Report.

Santa Cruz Sentinel, "Pipeline project gets cash infusion," May 13, 2005.

Santa Cruz Sentinel, "Upgrade planned for Watsonville's water treatment plant," March 6, 2005.

Watsonville Urban Management Plan, 2000.

Findings

1. Land use is divided into two categories for water planning purposes: agricultural (irrigation only) and urban (municipal, commercial, and industrial water users). Table 1 illustrates demand projections for agricultural and urban use.

	Current (2001) Conditions	Future (2040) Conditions
Demand¹	afy	afy
Agricultural Uses	59,300	64,400
Urban Uses	12,200	16,100
Total demand before additional conservation	71,500	80,500
Conservation		
Increased agricultural conservation (to be achieved by 2010)	4,500	4,500
Increased urban conservation (to be achieved by 2010)	500	500
Total Additional Conservation	5,000	5,000
Projected Total Demand with Additional Conservation	66,500	75,500

**Table 1: PVWMA’s Current and Projected Water Demands
Source: RMC, Inc. 2002 Report**

2. PVWMA water use data was gathered from City of Watsonville groundwater production records and groundwater basin charts for the agricultural category.
3. PVWMA meters all private wells pumping more than 10,000 acre-feet per year. There are approximately 800 water supply connections.
4. Current annual water use is approximately 71,500 afy. PVWMA projects a 9,000 afy increase in water use by 2040. Urban demand represents about 3,900 afy of the projected increase, while agricultural demand represents about 5,100 afy of the

¹ Current demand is based on current pumping (estimated at about 69,000 afy) and surface water diversions.

increase. According to PVWMA's conservation summary report, expected demand for water will be reduced by approximately 5,000 afy.²

5. The agency is locally funded. The primary funding sources are management fees and groundwater augmentation charges.
6. The management fee is assessed via the county tax rolls to all parcels within the agency's boundaries.
7. An augmentation charge is assessed to all well owners for water pumped within the agency's boundaries.
8. Water rates in the region have increased 100 percent in the last decade.
9. Several farmers have sued PVWMA challenging the constitutionality of charging farmers for drawing water from their own wells. The augmentation fees and their increases were put in place without an election.
10. In the coastal areas and much of the groundwater basin of the Pajaro Valley, groundwater overdraft has caused water levels to drop below sea level. This creates a groundwater pressure gradient that causes seawater from the Pacific Ocean to move inland where it mixes with fresh groundwater. This is called seawater intrusion.
11. Seawater intrusion, documented since the 1950s, is increasing. This is degrading groundwater quality and limiting its use for irrigation and domestic purposes.³
12. PVWMA proposes a water pipeline connection from the Central Valley to the Pajaro Valley to replenish the water table and supply coastal areas with fresh water. The purpose of this project is to provide quality surface water and recycled water for the long-term sustainability of agricultural irrigation and production to replace existing groundwater pumping.

This project will:

- prevent long-term seawater intrusion, groundwater overdraft and water quality degradation;
- manage existing and supplemental water supplies to control overdraft and provide for present and future water needs;
- create a reliable, long-term water supply for the economic vitality of agricultural business in the Pajaro Valley;
- develop water conservation programs; and
- recommend cost-effective and environmentally sound programs for water management in the Pajaro Valley.

² PVWMA Revised Basin Management Plan.

³ PVWMA Revised Basin Management Plan.

13. The pipeline connecting to the Santa Clara Valley conduit of the Central Valley Project was approved by the Federal Bureau of Reclamation. The pipeline is scheduled for construction in 2005-2006. The bureau is providing federal funds for the design, planning and construction of the Watsonville wastewater treatment plant. Agricultural wells in the south county area have been metered and are charged for water usage.
14. PVWMA was awarded federal grant monies of \$23.1 million made available to counties in the state under Proposition 13, the state water bond passed in 2000. Portions of the grant will go toward the 22-mile, \$100-million pipeline proposed by the agency.
15. In the year 2000, PVWMA instituted a requirement for all growers to submit annual plans summarizing their irrigation and conservation practices. If all growers participate in the program, agricultural water conservation could result in water savings averaging approximately 4,500 afy.
16. The proposed agricultural conservation program will take approximately seven to 10 years before the potential average annual water conservation savings of approximately 4,500 afy can be achieved. Implementing the program, facilitating improvements using computerized irrigation scheduling techniques and using weather data for further identification and correction of irrigation deficiencies will take time.
17. The proposed agricultural water conservation program is intended to improve irrigation efficiency in the Pajaro Valley. Evaluation by water-monitoring teams, during the periods of 1990-1994 and 1999-2001, indicated irrigation efficiencies vary considerably.
18. PVWMA was granted permission by the Coastal Commission to build a 50-foot-deep pipeline under the Pajaro River to deliver water to coastal farmers in Santa Cruz and Monterey counties. The pipeline will run from the city's wastewater treatment plant to Springfield Terrace, a farming area three miles south of Pajaro.
19. The State Department of Water Resources is providing PVWMA with \$23 million for projects and \$5 million in loans to complete its projects. These include recycling city water at the treatment plant and drawing from Harkins Slough.

Conclusions

1. Water rates have increased dramatically in the last decade. Implementing rate increases without an election caused farmers to file lawsuits against PVWMA.
2. PVWMA needs to prevent continuing overdraft of the basin and halt seawater intrusion.
3. By tracking water usage in private agricultural wells, PVWMA is able to develop and implement conservation programs and continuously evaluate the condition of the groundwater basin.

4. PVWMA applied for and secured large grants for water projects currently in development.
5. Construction of the pipeline to meet the Santa Clara Valley conduit does not ensure the end of water problems in the Pajaro Valley.

Recommendations

1. PVWMA should implement a reduction in water rates for users who conserve water on a consistent, year-round basis.
2. PVWMA should continue to cooperate with other water agencies to prevent seawater intrusion and develop cost-effective and efficient water-conservation methods.
3. PVWMA should be commended for securing funding for water projects in the Pajaro Basin.
4. PVWMA should engage farmers and agricultural enterprises to develop and efficiently manage conservation efforts. Participation could be assured by having a recognition and reward system in place or by having strict penalties for wasting water.
5. PVWMA should encourage water users to visit the web site, www.watersavingtips.org, to learn more about conservation.

Responses Required

Entity	Findings	Recommendations	Respond Within
Pajaro Valley Water Management Agency	1-19	1-5	90 Days (September 30, 2005)

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