

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

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The demand figures reflect data on estimated usage contained in the 2002 Revised Basin Management Plan (BMP). Since 2002, agency billing records show metered usage is less than the estimates contained in the Revised BMP. However, it is important to note that metered usage also does not necessarily reflect the actual amount of groundwater pumped in the groundwater basin, and actual usage may be higher.

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

2. PVWMA water use data was gathered from City of Watsonville groundwater production records and groundwater basin charts for the agricultural category.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

In the Revised BMP, urban use was estimated based on City of Watsonville groundwater production records, plus historic urban acreage multiplied by average water usage estimates for unincorporated areas. Agricultural usage was estimated based on computer model simulations, taking into account numerous factors including: historic crop data; rainfall; evapotranspiration; irrigation methods; hydrologic data; and other factors.

3. PVWMA meters all private wells pumping more than 10,000 acre-feet per year. There are approximately 800 water supply connections.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

Agency Ordinance 93-2 actually requires an agency meter to be installed on any groundwater extraction facility unless the facility produces less than 10 acre-feet per year or is operated by a major water purveyor that meters its own water production.

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

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The finding accurately reproduces estimates contained in the agency's 2002 Revised BMP. As discussed above, metered water usage since 2002 has been less than the Revised BMP estimates.

5. The agency is locally funded. The primary funding sources are management fees and groundwater augmentation charges.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The agency has also been very successful in securing federal and state grant and loan funding.

6. The management fee is assessed via the county tax rolls to all parcels within the agency's boundaries.

Response: Pajaro Valley Water Management Agency AGREES.

7. An augmentation charge is assessed to all well owners for water pumped within the agency's boundaries.

² PVWMA Revised Basin Management Plan.

Response: Pajaro Valley Water Management Agency AGREES.

8. Water rates in the region have increased 100 percent in the last decade.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES but is otherwise UNABLE TO RESPOND.

The agency does not maintain records concerning historic water rates “in the [undefined] region.” On the other hand, in 1995, the agency adopted Ordinance 95-1 setting groundwater augmentation charges for fiscal year 1995-1996 (beginning July 1995) at \$35/acre-foot. In December 2004, the agency adopted Ordinance 2004-02 increasing the augmentation charge from \$120 to \$160/acre-foot (with periodic increases and adjustments prior to 2004). Over the past decade, this amounts to an increase of well over 100 percent.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The agency disagrees with the characterization of augmentation charge as a charge “upon farmers for drawing water from their own wells.” In fact, the augmentation charge applies to all groundwater users, not just farmers, and is used for programs to help reduce groundwater overdraft and saltwater intrusion, a decades-old problems to which all groundwater users in the Pajaro Valley, including farmers, have undeniably contributed and which continues presently. The agency disagrees that the augmentation charge and increases thereto were put in place without an election. In fact, there have been several local ballot measures dealing with the augmentation charge including Measures D, K and L in 1998 and Measure N in 2002. The latter measure repealed a portion of Measure D that limited augmentation charges to \$50 per acre-foot.

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.

Response: Pajaro Valley Water Management Agency AGREES.

11. Seawater intrusion, documented since the 1950s, is increasing. This is degrading groundwater quality and limiting its use for irrigation and domestic purposes.³

Response: Pajaro Valley Water Management Agency AGREES.

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.

³ PVWMA Revised Basin Management Plan.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The pipeline connection is a key component of the overall Revised BMP program, which has objectives as described. Other capital facilities components of the program include the Harkins Slough Project, joint PVWMA-Watsonville recycling project, Coastal Distribution System and inland supplemental wells.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The pipeline connection received U.S. Bureau of Reclamation approval in the sense that federal environmental review (i.e. an Environmental Impact Statement) was successfully completed in 2004. As a result of a number of factors, including the pending augmentation charge litigation, the pipeline construction schedule has been delayed. All water extraction facilities (except for small residential wells) are required to be metered, not just agricultural wells in the south county area.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The \$23.1 million grant, plus an additional \$5 million, low-interest loan, was awarded by the State Department of Water Resources, not the federal government. A separate federal grant in the amount, of \$20 million, has been authorized by Congress to be disbursed through the U.S. Bureau of Reclamation to assist in the cost of constructing the joint PVWMA-Watsonville recycling project. The City of Watsonville is constructing the recycling project and is the recipient of the federal grant but, by proposed agreement with the agency, would be reimbursed by the agency for any construction costs in excess of grant funds received.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The requirement for annual plans was intended to help identify problem areas for potential water conservation savings and to document savings made, but not necessarily to generate savings of this magnitude as a direct result of plan submittals.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

Recent water meter data indicate that agricultural water use is already at least 4,500 afy below “Current (2001) Conditions” as projected in the Revised BMP. Whether this lower figure is explained fully by conservation savings remains an open question.

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.

Response: Pajaro Valley Water Management Agency AGREES.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The “permission” granted by the Coastal Commission was actually the issuance of a number of Coastal Development Permits for construction of the Coastal Distribution System component of the Revised Basin Management Plan programs, which includes a pipeline under the Pajaro River connecting the Santa Cruz County and Monterey County components of the system.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The referenced grant and loan are designated for construction of the Coastal Distribution System and components of the Revised BMP projects other than the proposed recycling facility and Harkins Slough local water supply project.

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.

Response: Pajaro Valley Water Management Agency PARTIALLY AGREES.

The agency’s practice of basing augmentation charges on a per-unit-of-consumption basis rewards users who conserve water. The agency has previously considered additional incentives, including reduced rates to low water users, and it is not opposed to such concepts in principle. However, rate tiering in an agricultural setting is complicated and difficult to implement, given differences in farm sizes, crop rotations, tenancies, well sharing and other variables. The value of an additional incentive needs to be weighed against administrative cost and other program burdens.

- PVWMA should continue to cooperate with other water agencies to prevent seawater intrusion and develop cost-effective and efficient water-conservation methods.

Response: Pajaro Valley Water Management Agency AGREES.

PVWMA appreciates the recognition that it has established a track record for cooperation with other water agencies and for developing cost-effective and efficient water conservation methods. The agency agrees that it should continue to expand these efforts.

- PVWMA should be commended for securing funding for water projects in the Pajaro Basin.

Response: Pajaro Valley Water Management Agency AGREES.

PVWMA thanks the Grand Jury for its commendation.

- 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.

Response: Pajaro Valley Water Management Agency AGREES.

Conservation has been, and continues to be, an important component of the agency's overall water management strategy. The agency adopted a water waste ordinance in 1992 and enforces water waste violations strictly in accordance with this ordinance. New conservation ideas, such as a reward and recognition program, are always welcome.

- PVWMA should encourage water users to visit the web site, www.watersavingtips.org, to learn more about conservation.

Response: Pajaro Valley Water Management Agency AGREES.

The agency is a co-sponsor of www.watersavingtips.org, but agrees that it can and should do more to promote this web site as part of its water conservation outreach efforts. Toward this end, the agency has now added a link to www.watersavingtips.org on its web site.

Responses Required

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