

IV. MANAGE WATER DEMAND

Riparian Vegetation Mitigation #1 in the Five-Year Mitigation Program entails “conservation and water distribution management to retain water in the Carmel River.” Finding No. 389-A adopted by the District Board states that annual monitoring of conservation activities would be reported. This section includes information on the District’s conservation and demand management programs.

A. Water Conservation

Description and Purpose

The District has been actively involved with water conservation programs on the Monterey Peninsula since October 1979. In 1979, the District implemented its first conservation program that involved public speaking engagements, drought tolerant plant displays, a library of conservation ideas and techniques, development of a drought tolerant plant list, and regular public service announcements. In addition, the District co-sponsored public workshops on rainwater reuse and cisterns and prepared regular press releases regarding its activities.

The conservation program expanded in 1983 when the District agreed to facilitate the Water Conservation Plan for Monterey County. This plan was completed and adopted by the District Board of Directors in 1986. The goal was to save 15 percent of what was estimated to be the demand in 2020, roughly 3,600 AFA in savings with an estimated demand of 24,000 AFA.

The District has also been involved in water rationing planning and implementation since its inception in 1978. A water rationing plan developed by the Monterey Peninsula Water Management Agency (the predecessor to the District) was available when the District was established. The former plan was reviewed and amended in June 1981 with the adoption of Ordinance No. 7. The rationing plan was again amended in 1988 (Ordinance Nos. 35 and 37) during drought-related rationing administered by the District that continued through 1991. Water use reductions of approximately 30 percent were achieved during that time.

A cornerstone of the District’s program is its water conservation regulation (Regulation XIV). This Regulation requires retrofit of inefficient plumbing fixtures to ultra-low flow fixtures at the time a property changes ownership, for new construction and remodels, and for commercial changes in use or expansion. District staff inspects around 90 percent of the properties subject to retrofit and conservation requirements for compliance. Two full-time inspectors are in the field, visiting properties on a prearranged schedule, while office staff schedule and follow up on previously completed inspections. The inspectors document : (1) the number, type, and flow rates of all water fixtures in the building; (2) verify compliance with conditions of water permits or other approvals; (3) provide conservation information, (4) provide rebate applications and devices as needed, (5) note and report leaks to the property contact, and (6) generally verify that all requirements have been met. Properties failing to meet the requirements are given 30 days to correct any violation and are typically re-inspected to verify full compliance.

A second key element was added in 1997 when the District began issuing rebates for voluntary toilet replacements with 1.6 gallons-per-flush toilets. The initial program shared funding with California American Water (Cal-Am). The rebate program has been expanded over the years and is now

funded by Cal-Am and administered by the District. Rebates are available for high efficiency toilets, low consumption dishwashers and washing machines, instant-access hot water systems, Smart (weather-based) irrigation controllers, soil moisture sensors, rain sensors and cisterns. Irrigation system components listed above were added during 2007-2008.

Other components of the District's conservation program include an aggressive commercial retrofit program; the Expanded Water Conservation and Standby Rationing Plan (Regulation XV) to maintain water use with the limits set by the State Water Resources Control Board (SWRCB) Order WR 95-10 and the Seaside Adjudication Decision; distribution of water-saving showerheads, faucet aerators, hose shut-off nozzles, hose timers and other equipment; public education as a member of the Water Awareness Committee of Monterey County; and District policies and incentives to promote conservation in Jurisdictions within the District.

Implementation and Activities During 2007-2008.

- **Conservation Inspections** -- District staff continued an intensive inspection program to ensure compliance with the conservation regulations; inspections focused on change of ownership requirements and new construction or remodel water permit requirements and conditions.

Transfer of title inspections make up the bulk of the District's inspection program. Most of the **1,097** properties that changed ownership from July 2007 through June 2008 (FY 07-08) were inspected for installation of ultra-low flow fixtures prior to the close of escrow. **Eighty-two percent** (82%) of the inspected properties were found to meet the conservation requirements during the first inspection. An additional 2% passed the second inspection, typically after replacing older toilets identified during the initial inspection. To establish 100% compliance with the retrofit requirements, staff continues enforcement until compliance is achieved.

Water saving equipment is required as a condition of water permits issued for new construction and remodels. District staff inspected **828** properties in this category to verify compliance with water permit conditions. Inspections included verification of conservation measures, such as drip irrigation and "instant-access" hot water (systems that make hot water available within six seconds), as well as installation of ultra-low flow fixtures throughout the property.

For the above two categories, a total of about **1,608** inspections were conducted from July 2007 through June 2008. An estimated **17.332** acre-feet (AF) of water is being saved annually by the retrofits verified for these two categories during FY 07-08.

- **Other Conservation Incentives** -- The District continued to offer incentives for property owners who agree to install state-of-the-art water appliances to offset new water fixtures as a condition of their water permit. Credit, in the form of water fixture units, remained available for installing ultra-low water consumption dishwashers and washing machines, High Efficiency Toilets (HET) (i.e., toilets using 1.28 gallons per flush on average), and "instant-access" hot water systems in remodels and additions. During 2007-2008, **265** property owners agreed to one or more of these conditions for credit. This incentive program is one way to allow limited remodeling and expansions in use without increasing water use.

- **Rebate Program** -- In January 1997, the District enacted a program that offered rebates of

up to \$100 for every older residential toilet replaced with an ultra-low flow model. The program is co-funded with Cal-Am. Water saved through this program is set aside to reduce community water use. Initially designed to facilitate toilet replacements that might not otherwise occur for years, the program was expanded in 2003 to provide rebates for ultra-low consumption appliances, high efficiency toilets, and cisterns. In September 2007, the rebate program was amended to add rebates for smart controllers and sensors, and to increase the dollar amount refunded for high efficiency toilets to \$150.00; ultra-low water consuming dishwashers to \$125.00; 28 gallon per cycle ultra-low water consuming washers to \$150.00; 18 gallon per cycle ultra-low water consuming washers to \$200.00; and instant-access hot water systems to \$200.00

From July 1, 2007 through June 30, 2008 an estimated **13.681** acre-feet of water was permanently saved by the rebate program. A total of **950** applications were received, and **707** applications were approved. Most denied applications were from applicants located outside of the District or requested rebates for water fixtures that did not meet the District's criteria. The District and Cal-Am rebated **\$32,486.57** for toilets that were replaced as a result of this program, and **\$115,051.25** for ultra-low water consumption appliances, zero-water consuming urinals, hot-water demand pumping systems, and cisterns. The average refund per toilet was **\$59.00**. A breakout of the refunds is as follows:

- In the single-family residential sector, **917** refund applications were approved; **132** toilets were replaced for an annual savings of **3.036** AF or **989,284** gallons per year; **109** high-efficiency toilets were installed for an annual savings of **3.270** AF or **1,065,533** gallons per year; **157** ultra-low-water consuming dishwashers and **393** ultra-low-water consuming washing machines were installed for a savings of **6.366** AFY or **2,074,367** gallons per year.
- In the multi-family residential sector, **21** refund applications were approved; and **26** toilets were replaced for an annual savings of **0.598** AF or **194,859** gallons per year.
- In the non-residential sector, **12** refund applications were approved; and **12** toilets were replaced for an annual savings of **0.276** AF or **89,935** gallons per year; **4** high efficiency toilets were installed for an annual savings of **0.120** AF or **39,102** gallons per year; and **one** ultra low-water consuming washing machine was installed for an annual savings of **0.015** AF or **4,888** gallons per year.
- **Conservation Education** -- District activities remained focused on public education to encourage Peninsula residents and businesses to continue water conservation practices. Individual water waste education took place as necessary to remind water users not to wash sidewalks, leave hoses running or ignore leaks. The Expanded Water Conservation and Standby Rationing Plan has been successful in keeping community water use below the limits set by the State Water Resources Control Board.

The District also continued supporting water conservation education through the Water Awareness Committee of Monterey County (WAC). WAC is a nonprofit water-education organization serving Monterey County. The District holds a seat on the WAC Board of Directors and contributes annual financial and staff support. WAC provides books on water-efficient landscaping, drip irrigation, and other water related subjects to libraries in Monterey County, and provides numerous opportunities for the public to learn about local water issues.

The District participated in the Water Awareness Committee of Monterey County's 3rd Annual Xeriscape Design Awards at the Monterey County Fair by judging the garden displays. New for 2007 was a water "passport" program (Water Adventure Travels). This program provided visitors with an opportunity to "earn while they learn." Various water-related booths gave visitors a stamp for visiting. By visiting all the related booths (and receiving stamps), visitors had an opportunity to participate in a drawing for several water saving prizes. Prizes included a High Efficiency washing machine, a dual-flush toilet, a SMART irrigation system controller and a \$150 gift certificate.

District staff attended a "Water Conservation Practitioner" workshop that covered conservation practices, ideas and technology. The information presented confirmed the success of the District's conservation policies and practices. Two District staff continued their training by testing and becoming certified Water Conservation Practitioners.

District staff handed out water conservation devices and information at Pacific Grove's Good Old Days Celebration. The booth was located at the "Green Spot," an area dedicated to environmental protection, and was showcased by several large posters about steelhead, river restoration and the rebate program. Visitors learned about the District's extensive activities and programs.

District staff participated in several meetings with Cal-Am staff regarding implementation of the District's Expanded Water Conservation and Standby Rationing Program. Subjects included completion of landscape irrigation audits, public outreach, addressing distribution system losses and other topics related to conservation and contingency planning for possible future rationing. Representatives from Cal-Am and the District met in San Francisco to organize and coordinate ideas and future conservation budgets for Cal-Am's upcoming General Rate Case. Cal-Am and District staff met with Association of Monterey Bay Area Governments (AMBAG) staff to coordinate their energy conservation public information campaign with our planned communications on linen/towel/restaurant water conservation signs that are available locally.

District staff partnered with Cal-Am, AMBAG, the Monterey County Hospitality Association, Marina Coast Water District, Soquel Water and Santa Cruz Water to design and printed linen and towel placards for a local reuse program. In addition, a restaurant table tent informing customers that water is provided only on request was developed. The Monterey Peninsula products were distributed by door-to-door visitations by District and Cal-Am staff. Additional distribution and messages of product availability were distributed by the MCHA.

District staff attended an Urban Drought Workshop sponsored by the California Urban Water Conservation Council and the California Department of Water Resources. The District's Expanded Water Conservation and Standby Rationing Plan and the draft Contingency Implementation Plan for Stages 4-7 were mentioned repeatedly as models for other agencies to follow. The Monterey area is a leader in development of a current drought response plan. Copies of the District's documents were forwarded to the California Urban Water Conservation Council and Department of Water Resources for inclusion on their websites.

B. Water Distribution Management (Water Permits)

Description and Purpose

The District balances water supply and demand through the MPWMD Water Allocation Program by carefully tracking the amount of allotted water used by member jurisdictions. A number of ordinances have been adopted over the years to modify the permit program. A comprehensive listing of ordinance affecting this program is included in the Monthly Water Allocation Program Report.

In 1990, the District revamped its water allocation program, doing away with allocations based on a percentage of the total available production. Instead, a new process was initiated whereby only newly developed water supplies are available for new and/or expanding uses through an allocation by jurisdiction system. In mid-1993, the Paralta Well project received a use permit for operation, thereby making new water from the well available for the District to allocate to its eight member jurisdictions. The District allocated 358 AF for new Cal-Am metered sales, including 308 AF to the eight jurisdictions and 50 AF to a District “reserve” for community benefit projects.

Beginning with the release of the Paralta water for use, District staff established procedures for closely tracking the amount of water permitted to new and expanded water uses. Each jurisdiction in the District was given a portion of the water to use for permitting. Each applicant for water must receive the jurisdiction’s authorization for a specific quantity of water before applying to the District for a water permit. The District evaluates the project’s water demand and issues a permit for the project description as depicted on the final construction documents. At the time the water permit is issued, the jurisdiction’s water allocation is debited. Monthly reports show the amount of water remaining in the allocation and the permit activity for the month.

In addition to water available from the eight jurisdictions within the District, there are several finite water entitlements: Water West, a water company purchased by Cal-Am in the early 1990’s has an independent allocation of water for properties within the boundaries of the former system. Properties located in the Quail Meadow’s subdivision also have an independent entitlement of water.

Implementation and Activities During 2007-2008

- **Permit Activity** -- From July 1, 2007 through June 30, 2008, a total of **1,108** water permits were issued. As shown in **Table IV-1**, **14** new houses and **437** residential remodels/additions were permitted in the Cal-Am system. There were **52** non-residential water permits issued for remodels/additions and changes in use in the Cal-Am system. As of June 30, 2008, a total of **119.645 AF** of water remained available for use in the areas served by the Monterey Division of Cal-Am. This includes water from pre- and post-Paralta allocations and water added to a jurisdiction’s allocation from Water Use Credit transfers and public retrofits.

- **Reclamation** – The Carmel Area Wastewater District/Pebble Beach Community Services District (CAWD/PBSCD) Recycled Water Project began operation in 1994, producing reclaimed water to replace potable water previously used to irrigate golf courses and recreational open space in the Del Monte Forest (Pebble Beach area). At the start of operation, the District released water entitlements to the project sponsors for their fiscal participation: The Pebble Beach Company received 365 AF, Macomber Estates received 10 AF, and the Griffin Trust received 5 AF. The District retains 420 AF of the project’s estimated savings of 800 AF/year; none of the District share has been allocated.

Ordinance No. 109. In May 2004, the Board adopted Ordinance No. 109 (amending Rule 23.5) to enable financing of upgrades to the CAWD/ PBCSD Recycled Water Project. This ordinance enabled water entitlements held by the PBC to be made available to properties throughout the Del Monte Forest in order to finance the Project Expansion. Ordinance No. 109 also provided a framework for several ancillary agreements for financing, construction and operation, and sale of recycled water.

In April 2005, the first Water Use Permits were issued to property owners in the Del Monte Forest who purchased water from the PBC. By June 30, 2008, the District had issued Water Use Permits allowing **68.600** AF to be transferred from the PBC to independent property owners in the Forest. Property owners taking advantage of this program pay PBC for a portion of their entitlement and receive documentation of their purchase. The District processes and records a Water Use Permit on the title of the property that provides notice of the amount of water entitlement available. Regular water permits are required when the property owner desires to use the Water Use Permit.

Ordinance No. 132. In January 2008, the Board adopted Ordinance No. 132 (adding Rule 23.6) to allow the expansion and extension of the Cal-Am System to provide connections to, and potable water service for the use on and benefit of property located within Sand City. This rule enables the issuance of Sand City Water Use Permits for new and expanded water uses on Sand City sites, in a cumulative amount of no more than 206 acre feet per year.

- **Interagency Coordination** -- District staff continues extensive coordination with community development personnel from the local jurisdictions to facilitate communication regarding the Water Permit process. Presentations on the local water supply situation are given regularly, and meetings are held to discuss permit procedures and to answer questions about allocation management. Through these meetings, rapport has been developed with the local agencies, making the management of water supplies more productive and accurate.

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Prepared by Water Demand Division
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Table IV-1

CAW Permits Issued by MPWMD in Fiscal Year 2007-2008

| Main California American Water System Permits Issued (July 2007-June 2008) | | | |
|---|----------------|-----------------|------------------------------------|
| Type of Use | No. of Permits | Use (acre-feet) | Average Use Per Permit (acre-feet) |
| PARALTA & PRE-PARALTA | | | |
| New Residential | 14 | 2.174 | 0.156 |
| <i>Pebble Beach Entitlements*</i> | 7 | 3.029 | 0.433 |
| Residential Remodels/Additions | 437 | 1.368 | 0.004 |
| <i>Pebble Beach Entitlements*</i> | 48 | 3.606 | 0.076 |
| New Non-Residential | 3 | 6.006 | 2.002 |
| <i>Pebble Beach Entitlements*</i> | 0 | 0 | 0 |
| Non-Residential Remodels/Additions | 52 | 1.574 | 0.031 |
| <i>Pebble Beach Entitlements*</i> | 1 | 0.015 | 0.015 |

**Pebble Beach Entitlements are tracked separately from Main CALIFORNIA AMERICAN WATER System permits.*