V. URBAN WATER MANAGEMENT PLAN PROGRAMS

A. INTRODUCTION

This chapter describes and evaluates the Coronado District's Urban Water Management programs for the 2006 - 2010 period. It describes the water conservation programs that were in effect prior to preparation of the District's previous *Urban Water Management Plans*, as well as the programs that are being continued and refined in the present Plan.

The California-American Water Company is a signatory to the *Memorandum of Understanding Regarding Urban Water Conservation in California* (MOU) and is therefore a member of the California Urban Water Conservation Council (CUWCC). The MOU contains 14 demand management measures that signatories to the MOU agree to implement as part of their good faith efforts to optimize water savings. The CUWCC calls these demand management measures Best Management Practices (BMPs). In the *Urban Water Management Planning Act* they are termed DMMs (Demand Management Measures). The BMPs/DMMs are examples of sound water management practices that have been found to be cost effective and practicable in most instances throughout California. The BMPs are generally consistent with the water conservation practices that have been implemented by the Company under the existing *Urban Water Management Plan* (and in some cases, for much longer). Accordingly, the Coronado District's water conservation programs presented later in this chapter have been organized in a format that is consistent with the list of BMPs being implemented statewide by the CUWCC.

B. PREEXISTING WATER CONSERVATION PROGRAMS

The Coronado District of the California-American Water Company, in conjunction with other agencies in San Diego County and the Metropolitan Water District of Southern California, has actively promoted water conservation initiatives by its customers and staff. The District's water consumption peaked in 1989 at 14,338 AF and then declined by about 24% in response to water

rationing instituted during the 1991 - 1993 drought. Consumption has gradually rebounded during the recent run of years with normal or above normal precipitation but remains about 5.8% below the 1989 level on a consumption per connection basis.

Today, the District's on-going water conservation measures, some of which had been in place for many years prior to the 1990 UWMP, include the following:

1. METERING

All Cal-Am water connections are metered. Metering is recognized as sound urban water management practice as well as a basic water conservation measure (DMM 4). The District's sources of supply are also metered, and the supply meters can be cross-checked against sales data to allow the District to identify water lost in the transmission/distribution system. The District's supply source meters are tested once per year; customer meters are regularly replaced and recycled. Approximately 83% of customer meters are 10 years old or less while only 41 meters out of over 20,500 are more than 15 years old.

2. MAINTENANCE OF WATER USE RECORDS BY USER TYPE

While the record keeping itself does not save water, the data it provides is fundamental to evaluating the effectiveness of water conservation programs.

3. SYSTEM PRESSURE CONTROL PROGRAM

The District manages water pressure throughout its system as required by CPUC regulations. The primary purpose of pressure regulation is to ensure that pressures are high enough to meet fire flow needs. However, if water pressure is too high, more water will be lost when fixtures leak or if water is inefficiently applied.

4. SUPPLY SIDE MANAGEMENT

The Company is committed to maximizing the efficient use of water within its operations. This requires accurate metering of production facilities, with scheduled meter testing and replacement programs.

Cal-Am has on-going programs to maintain the efficiency and integrity of the transmission and distribution systems operated by the Coronado District and the amount of water lost in the transmission and distribution system is very low — averaging only 2.7% of purchases over the past 5 years. These include pipeline replacements and leak detection work by maintenance personnel, as summarized below.

Pipeline Replacements. The Company has a continuing capital investment program for the replacement of old and deteriorated pipelines, which account for most leaks. In the past 5 years the District has invested an average of $172,000 annually in the replacement of transmission and distribution mains with known leakage problems or which require frequent maintenance. In the ten-year span between 1984 and 1993 the District replaced the old, unlined cast-iron mains wherever feasible, whether or not they were leaking. This has resulted in fewer new breaks or leaks and is a major factor in the District's record of very low water losses.

Use of Leak Detection Equipment. California American Water has an official water loss control and leak detection program.[1] Since water losses in the Coronado District have been low, and it has been sufficient for the Company to repair distribution leaks as quickly as possible after they are reported.

5. PLUMBING FIXTURES RETROFIT PROGRAMS

California American Water has distributed thousands of residential plumbing retrofit devices since the last statewide drought in the early 1990's. Since 1992, approximately 8,500 "Toilet Tank Bank" displacement bags have been distributed to customers. Prior to that the District

[1]California-American Water Company, *Water Loss Control and Leak Detection*, Distribution Policy No. 7, Approved by Board of Directors, May 9, 1988.

distributed 2,000 to 3,000 retrofit kits, consisting of a toilet tank bag, a packet of leak detection dye tablets and conservation literature.

California American Water has promoted the installation of low flow showerheads in conjunction with various conservation programs conducted during the past 15 years. Approximately 7,000 have been distributed to customers, without charge, from the District Office. Currently, low flow showerhead kits are available at the office site and are offered with the toilet rebate programs. The low flow showerheads have a maximum flow rate of 2.75 gallons per minute, compared to non-conserving showerheads with flow rates of 5 to 8 gpm.

Since 1993 the Coronado District promoted the use of positive shut-off hose nozzles for outdoor use. The Company has purchased and distributed over 3,000+ nozzles. A positive shut-off nozzle has the potential to save as much as 50 gallons of water during a single home car wash.

A successful Ultra Low Flow Toilet rebate program has been operated every year since 1991. Rebates are provided to single family residential homes, including townhomes, master metered condominiums and mobile homes as well as duplexes and triplexes. The rebates are $75 for the first toilet and $50 for each additional toilet. The program is typically announced in the November/December bills and applications are accepted beginning January 1 and processed in the order received. In all, over 3,000 ULF toilets have been installed under this program, resulting in an estimated water savings of 25 AFY.

6. PUBLIC EDUCATION

Since the 1977-78 drought, the District has implemented regular public education and information efforts related to water conservation and a wise use ethic. Programs and activities that have been undertaken in the past 10 years have included:

- The on-going maintenance of a water conservation information and supply display in the entryway of the District office where it can be seen by all visiting customers;
- The sponsorship of a public education booth and information kiosk during the Sand Castle Weekend festivities (which regularly attracts more than 200,000 visitors);

- Provision of free curriculum materials and other support for water education activities in schools, upon teacher request;
- Sponsorship of the *National Theater for Children* (formerly *Small Change Theater*) programs with a water conservation theme at elementary schools in the District;
- The development of demonstration gardens using low water use plants at the District office and at the Imperial Beach Senior Citizen's Center.

In addition, all of Cal-Am's customer's are shown their past year's usage for the same period on each water bill when the information is available (i.e. when the account has been open for more than one year). This important information can be very effective in alerting customers to plumbing problems or changes in habits and may often generate a conservation response.

The Coronado District has indirectly benefited from the public education programs of other water agencies, including the City of San Diego and the County Water Authority, because many of the District's customers have seen these other agency's billboards, read their newspaper ads and seen and heard their public service announcements.

The Company believes that all of these efforts not only improve the effectiveness of water conservation programs, but they will also prove beneficial during emergencies, when a more educated public is more understanding and cooperative in complying with any voluntary or mandatory actions that might be requested by the Company to restrict their water usage.

C. WATER CONSERVATION PROGRAMS — 2006 - 2010

1. DMM 1. WATER SURVEY PROGRAMS FOR SINGLE-FAMILY AND MULTI-FAMILY RESIDENTIAL CUSTOMERS (BMP 1)

BMP 1: Implementation shall consist of at least the following actions:

Develop and implement a strategy targeting and marketing water use surveys to single-family and multi-family residential customers.

Directly contact not less than 20% of single-family and 20% of multi-family residential customers each reporting period.

Surveys shall include indoor and outdoor components.

Customers shall be provided with results.

Track survey offers, completions, results and costs.

In 1992 and 1993, 175 residential water audits were conducted for the owners of single-family homes who responded to offering letters. The audits were conducted by an outside contractor on a representative group of homes located in all four cities served by the District. The audits covered both indoor and outdoor water use and were well received.

Cal-Am subsequently applied for authorization from the California Public Utilities Commission for permission to be reimbursed for expenses incurred in conducting water audits on a continuing basis, pursuant to BMP 1. The request was denied. The Company, therefore, has not developed a formal water audit program and does not currently expect to have one in place during the term of this plan.

However, the Company's customer service personnel continue to conduct an informal "Alert, Check and Control" auditing program for all customers. This program has been internally developed in conjunction with the standard meter reading and billing process. The billing clerks regularly scan the meter reading data as it is filed and compare it with past usage data. Any anomalies in the data are noted (the Alert) and the appropriate customer service representatives are informed. They visit the site, verify the meter reading and look for obvious leaks or problems (the Check). In many cases a flow recording device is placed on the meter to identify usage patterns, which in turn can indicate possible internal leaks. The customer is kept informed and is offered assistance in identifying and correcting any problems (the Control). In the past, a number of malfunctioning toilets, faucets and irrigation devices have been discovered and repaired in this way.

IMPLEMENTATION: At the present time, Cal-Am has not budgeted for a formal water audit program during the term of this Plan. However, the Company will renew its requests for reimbursement of the costs of administering a formal water audit program. If a cost reimbursement program is approved a program will be designed and implemented with alacrity.

2. DMM 2. RESIDENTIAL PLUMBING RETROFIT (BMP 2)

BMP 2: Implementation shall consist of at least the following actions:

Develop a targeting and marketing strategy to distribute or directly install low-flow showerheads, toilet displacement devices, toilet flappers and faucet aerators to single-and multi-family residences constructed prior to 1992.

Maintain distribution and/or direct installation programs so that devices are distributed to not less than 10% of single-family connections and multi-family units each reporting period or require through an enforceable ordinance the replacement of high-flow showerheads and other water using fixtures with their low-flow counterparts, until it can be demonstrated that 75% are retrofitted.

Cal-Am has implemented programs to provide free "Toilet Tank Banks," low flow showerheads and positive shutoff hose nozzles to customers requesting them since 1992. Over 8,500 toilet tank displacement bags and over 9,000 low-flow showerheads have been distributed under these programs. In addition, 2,000 to 3,000 toilet retrofit kits were distributed in the mid to late 1980's.

Cal-Am continues to keep an inventory of showerheads in the District Office and promotes them to visiting customers. They will also be distributed for free by customer service representatives in the field who respond to concerns regarding high water bills, plumbing leaks, etc.

IMPLEMENTATION: The Company will continue to make plumbing retrofit kits available upon customer request and in conjunction with trouble shooting visits by field personnel. The Company will inform customers of their availability through information messages on water bills and bill inserts. (See, also, DMMs 1, 5 and 9.)

3. DMM 3. DISTRIBUTION SYSTEM AUDITS AND LEAK DETECTION AND REPAIR (BMP 3)

BMP 3: Implementation shall consist of at least the following actions:

Annually complete a prescreening system audit to determine the need for a fullscale system audit.

When indicated, complete a distribution system audit using methodology consistent with the American Water Works Association's "Manual of Water Supply Practices, Water Audits and Leak Detection.

Advise customers whenever it appears possible that leaks exist on the customer's side of the meter; perform system leak detection when warranted and repair leaks when found.

Cal-Am has an established *Water Loss and Leak Detection Policy*[1], *which* is followed by Cal-Am personnel when conducting routine fieldwork. Leaks found are prioritized and scheduled for repair as quickly as possible. Larger leaks are given higher priority, while the largest leaks are considered emergencies and are repaired as quickly as the personnel and equipment can be mobilized.

The level of unaccounted-for water in the Los Angeles Division has historically been below 10%, the industry standard for acceptable distribution system efficiency. It is also the threshold level for a system audit under this BMP.

IMPLEMENTATION: BMP 3 requires system audits when unaccounted-for water exceeds 10% of production, a level the District has not exceeded in many years, if ever. Based on this, the District considers itself to be in compliance with BMP 3 and with DMM 3.

The level of unaccounted-for water will be regularly calculated and the system wide surveys of distribution facilities will be reinstated if water losses rise appreciably.

4. DMM 4. METERING WITH COMMODITY RATES (BMP 4)

BMP 4: Implementation shall consist of at least the following actions:

Requiring meters for all new connections and billing by volume of use.

Identifying a program for retrofitting existing unmetered connections and billing by volume of use.

Identifying intra- and inter-agency disincentives or barriers to retrofitting mixed use commercial accounts with dedicated landscape meters, and conducting a feasibility study to assess the merits of a program to provide incentives to switch mixed use accounts to dedicated landscape meters.

---

[1] California-American Water Company, *Distribution Policy 7, Water Loss Control and Leak Detection,* adopted by the Board of Directors, May 9, 1988.

California American Water Coronado District is fully metered and all customers are billed on the basis of a set service charge per meter plus a volume of use charge. The volume of use charge currently in effect is $2.0938 for the initial unit of 0.61 ccf and $2.1885 for each additional unit of 0.61 ccf unit (0.61 ccf = 456.3 gallons).

IMPLEMENTATION: This BMP is being fully implemented. It should be noted that no changes in rates or in the rate structure may be implemented unless they are authorized in advance by the California Public Utilities Commission.

5.DMM 5. LARGE LANDSCAPE CONSERVATION PROGRAMS AND INCENTIVES (BMP 5)

BMP 5: Implementation shall consist of at least the following actions:

Provide non-residential customers with support and incentives to improve their landscape water use efficiency. This support shall include the following:

Identify accounts with dedicated irrigation meters and assign Eto-based water use budgets. Provide notices each billing cycle to accounts with water use budgets showing the relationship between budget and actual consumption.

Develop and implement a strategy targeting and marketing large landscape water use surveys to CII accounts with mixed-use meters. Each reporting period, directly contact via letter or telephone not less than 20% of such accounts and offer water use services.

Provide information on climate-appropriate landscape design, efficient irrigation equipment/management to new customers and change of service customer accounts.

Recommended actions:

Install climate appropriate water efficient landscaping at water agency facilities.

Provide customer notices prior to the start of the irrigation season alerting them to check their irrigation systems and make repairs as necessary. Provide notices at the end of the irrigation season advising them to adjust their irrigation system timers and irrigation schedules.

The largest landscape irrigator in the Coronado District is the Coronado Municipal Golf Course. Other major landscape irrigators are the Cities, which irrigate parks and the school districts, which irrigate athletic fields and school playgrounds.

The District believes that the cost of water, which is based on volume of use, provides a very strong customer incentive for the careful application of water to large landscaped areas. Prior to 1995, the San Diego County Water Authority conducted an average of 3 - 4 large turf audits annually for Cal-Am customers. Subsequently, the Authority decided to restrict the offer for large turf audits to customers located in the District's San Diego service area.

The Water Authority has recently developed a program to provide rebate incentives to encourage the installation of emerging technology weather based irrigation system controllers for both residential and large landscape areas, matching fund incentives for irrigation hardware upgrades at commercial landscape sites and even incentives for installing artificial turf at sports fields and playgrounds.

IMPLEMENTATION: During the term of this Plan, the District will request PUC approval for increased funding of water conservation programs and will consider sponsoring, or joining with the Water Authority to co-sponsor, a program of large landscape water audits in the Coronado District.

The District's Conservation Coordinator will develop and implement a program to identify the largest CII accounts with mixed-use meters to identify candidates for the installation of separate irrigation meters. Once identified, participants will be selected based on their interest and willingness to follow the auditors recommendations. Water use surveys and the installation of separate irrigation meters will be offered to these customers, with appropriate follow-up as suggested in BMP 5. To assess the magnitude of water savings, Cal-Am will evaluate water sales data for the participating customers before and after the audits. This data will be used in determining whether the program should be expanded to include more landscape customers in the future.

The District will also consider funding an expansion of the Water Authority's incentive programs for installing new weather based irrigation controllers, irrigation hardware upgrades and artificial turf projects.

6. DMM 6. HIGH-EFFICIENCY WASHING MACHINE REBATE PROGRAM (BMP 6)

BMP 6: Implementation shall consist of at least the following actions:

Until January 1, 2007, the water agency shall offer financial incentive, if cost effective, for the purchase of high-efficiency clothes washing machines (HEWS) meeting a water factor of 9.5 or less.

Any financial incentive offered shall be not less than the marginal benefits of the water savings, reduced by the necessary expense of administering the incentive program. A program is not required if the agency determines that the maximum cost-effective incentive is less than $50.

Cal-Am has a program of rebates for high efficiency washing machines available to customers of the Coronado District. Rebates of $50.00 are provided for qualifying high efficiency washing machines. The rebates could be supplemental to rebates that may be available from other utilities such as San Diego Gas and Electric or the Municipal Water District of Southern California.

IMPLEMENTATION: Cal-Am will continue the HEWS rebate program though 2006, in accordance with BMP 5. The Company will consider joining the San Diego Water Authority's HEWS rebate program and/or matching the amount of the Authority's rebates, which are currently $125.

7. DMM 7. Public Information (BMP 7)

BMP 7: Implementation shall consist of at least the following actions:

Implement a public information program to promote water conservation and conservation related benefits.

Program should include providing speakers to community groups and the media; using paid and public service advertising, using bill inserts; providing information on customers bills showing use in gallons per day for the last billing period compared to the same period the year before; providing public information to promote other water conservation practices; and coordinating with other governmental agencies, interest groups and public interest groups.

Cal-Am's Coronado District has conducted a variety of public education activities over the past fifteen years and expects to continue these efforts during the term of this Plan. The public information programs have focused, generally, on customer information, in-school education, and community outreach. In addition to its own programs, the Company has benefited from mass media oriented programs undertaken by the City of San Diego and the San Diego County Water Authority, especially those involving advertising, news coverage and public service announcements on radio, television and billboards.

The purpose of the public education programs has been to motivate customers to conserve water and to promote understanding and dialogue in the community on water conservation topics. As would be expected, these programs have been most active during water shortages.

IMPLEMENTATION: The public information activities that are currently being implemented will be carried forward in this Plan. They include all of the implementation programs suggested in BMP 7, e.g. bill inserts, water conserving text messages on bills, past usage information on bills, continued distribution of water conservation information, public service announcements, and coordination with other public agencies and interest groups.

8. DMM 8. SCHOOL PROGRAMS (BMP 8)

BMP 8: Implementation shall consist of at least the following actions:

Implement a school education program to promote water conservation and conservation related benefits.

Programs shall include working with the school districts and private schools in the water supplier's service area to provide instructional assistance, educational materials and classroom presentations that identify urban, agricultural, and environmental issues and conditions in the local watershed. Education materials shall meet the state education framework requirements, and grade appropriate materials shall be distributed to grade levels K-3, 4-6, 7-8 and high school.

Cal-Am sponsored *National Theatre for Children* plays (with a water conservation theme) for the ten elementary schools in the District from 1990 - 1998. The District believes that its theater programs have been reaching most of the students at the elementary schools in the service area.

In addition, the company has distributed teaching materials from AWWA and other sources to interested teachers upon request.

IMPLEMENTATION:

Throughout the term of this UWMP, the Coronado District will continue to support, and benefit from, the regional water education programs sponsored by its wholesalers. The primary objective of Cal-Am's efforts related to BMP 8 will be to ensure that schools in the Coronado District service area are adequately represented and participating in these programs.

9. DMM 9. CONSERVATION PROGRAMS FOR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL (CII) ACCOUNTS (BMP 9)

BMP 9: Implementation shall consist of both (a) and (b) and either (c) or (d):

(a) Identify and rank CII accounts according to water use;

(b) Implement a program to accelerate replacement of high-water using toilets with ULFTs in CII accounts;

(c) Implement a CII Water-use Survey and Customer Incentives Program such that 10% of the CII accounts are surveyed within 10 years of the date of implementation;

(d) Achieve a water use reduction in CII sectors equaling or exceeding 10% of the baseline (1997) use over a 10-year period.

The Coronado District has about 1,950 commercial connections and 320 institutional (Public Authority/Other) connections. There are no industrial connections. The commercial and institutional connections account for about 47% of the District's total sales. The largest commercial customers in the District are hotels, multi-family apartment and condominium complexes. The residential customers qualify for residential retrofit devices under DMM 2, and for washing machine and toilet rebates under DMM 6 and DMM 14. Many of the Public Authority/Other accounts are either mixed use or dedicated landscape irrigation accounts and will qualify for participation in the District's programs planned under DMM 5. The District staff regularly responds, on an informal basis, to phone calls or walk-in complaints about excessive runoff from landscape irrigation systems. These are often symptoms of broken sprinkler heads or improper maintenance, and are typically corrected after a phone call or field visit from a Cal-Am representative.

The volume of use pricing has proven to be a powerful conservation incentive for a number of the largest multi-family accounts. This is especially true where there is volume pricing for both water and sewage treatment service. (See DMM 11, below.) In some cases, homeowner's associations and mobile home parks have voluntarily elected to install sub-meters for each residential unit so that the occupants can be held responsible for the cost of their individual volume of use. One manager has reported that the reduced water costs have been considerable (23%), resulting in a payback period for the meter system installation of just over 1 year.

IMPLEMENTATION. As noted, many of the District's CII customers qualify for the water conservation programs developed under DMMs 2, 5, 6 and 14. Participation in these programs will reduce demand in the Commercial and Public Authority/Other sectors. The District will continue to extend its ULFT and HEWS rebate programs to commercial as well as residential customers and will work with its commercial accounts, in response to queries or complaints, to improve their water use efficiency.

In addition, Cal-Am will consider joining with the Water Authority to facilitate the extension of the Authority's ongoing CII programs to the Coronado service area.

10. DMM 10. WHOLESALE AGENCY ASSISTANCE PROGRAMS (BMP 10)

BMP 10: Implementation shall consist of at least the following actions:

Wholesale water suppliers shall provide financial incentives, or equivalent resources, as appropriate, beneficial and mutually agreeable to their retail water agency customers to advance water conservation efforts and effectiveness.

This demand management BMP requires wholesale water suppliers to provide financial incentives, or equivalent resources, to their retail water agency customers for the advancement of water conservation efforts.

IMPLEMENTATION. Since the Coronado District is not a wholesale water supplier, this BMP is applicable.

11. DMM 11. CONSERVATION PRICING (BMP 11)

BMP 11: Implementation shall consist of at least the following actions:

Implementation methods shall be at least as effective as eliminating non-conserving pricing and adopting conserving pricing. For signatories supplying both water and sewer service, this BMP applies to pricing of both water and sewer service. Signatories that supply water but not sewer service shall make good faith efforts to work with sewer agencies so that those sewer agencies adopt conservation pricing for sewer service.

EXISTING RATE STRUCTURE. The Coronado District currently has water conserving, increasing block rate, volume of use, pricing for all categories of customers. The current rate is $2.0938 for the first 0.61 ccf; and 2.1885 for each subsequent units of 0.61 ccf. Volumes of use charges are added to a basic service charge, which is dependent on the size of the meter. The most common 5/8 X 3/4 -inch meter is $18.16 per month. These rates are subject to periodic review and revision by the Company, subject to PUC approval.

Cal-Am does not provide sewage treatment for customers in any of its Districts. In the Coronado District, sewage treatment is provided by one of four agencies, depending on the customer's location. In Imperial Beach, treatment is provided by the City of Imperial Beach. The rate structure is based on a set flat rate for each user category plus a volume of use rate. In Coronado, sewage treatment costs are paid for from an annual property tax assessment based on user type combined with the overall water usage for the City. In San Diego, the sewage treatment costs are assessed on the basis of a customer's "winter daily average" (November 1 - February 28). In Chula Vista, sewage treatment costs are set at a flat rate based on user type.

Of these four cities, Imperial Beach and San Diego have good water conserving rate structures, while Chula Vista's rate structure provides no incentive to conserve. The Coronado rate system is, in part, a volume of use pricing structure, but its assessment is so infrequent (annually) and the volume is so far removed from individual control (e.g. city average) that its conservation benefits are limited.

IMPLEMENTATION: Cal -Am will continue to maintain volume of use pricing with an inclining block rate structure for water service. It is important to emphasize that no changes in rates or the rate structure can be implemented unless they are authorized in advance by the California Public Utilities Commission.

The Company has no jurisdiction over sewage treatment rates, but will encourage more aggressive conservation pricing when the opportunities arise.

12. DMM 12. CONSERVATION COORDINATOR (BMP 12)

BMP 12: Implementation shall consist of at least the following actions:

a) Designation of a water conservation coordinator and support staff (if necessary), whose duties shall include the coordination and oversight of conservation programs and BMP implementation, preparation and submittal of Council BMP Implementation Reports, and communication and promotion of water conservation issues to agency senior management, coordination of agency conservation programs with operations and planning staff; preparation of annual conservation budget; participation in the California Urban Water Conservation Council; and preparation of the conservation elements of the agency's Urban Water Management Plans.

b) Agencies jointly operating regional conservation programs are not expected to staff duplicative and redundant conservation coordinator positions.

Cal-Am has a Conservation Coordinator responsible for overseeing the water conservation programs being implemented in all of the Company's service areas in California. In addition, the Conservation Coordinator is assisted by local staff, and draws upon the resources of personnel from the central billing operations, and the customer call center to ensure that the public information efforts and rebate programs are effectively implemented. The District has utilized outside consultants for other water conservation related activities including the 1992 - '93 water audit program, some of the school programs, and for the preparation of this report.

IMPLEMENTATION: The Conservation Program Manager, with assistance from other staff, as needed, will continue to fulfill the Coronado District's needs for the management and coordination of its water conservation programs.

13. DMM 13. WATER WASTE PROHIBITION (BMP 13)

BMP 13: Implementation methods shall be enacting and enforcing measures prohibiting gutter flooding, sales of automatic (self regenerating) water softeners, single pass

cooling systems in new connections, nonrecirculating systems in all new conveyer car washes and commercial laundry systems and non-recycling decorative water fountains.

This BMP calls for water agencies to enact and enforce certain prohibitions against wasteful water use on an on-going basis, i.e. during drought and non-drought periods. The ordinances should prohibit, at a minimum, gutter flooding, non-recirculating fountains, non-recirculating systems in any new car wash or commercial laundry installations, and any new single-pass cooling systems.

IMPLEMENTATION. The Coronado District does not have the ability to adopt a waste water prohibition ordinance, as it is a private company, not a public agency. However, Emergency Water Management Programs for the Cities of Imperial Beach and Coronado contain provisions stating "at no time shall water be wasted or used unreasonably."[1] The Company's authorization to prohibit wasteful water use is derived from the CPUC's Rule 11, which establishes the District's regular operating procedures. It permits the Company to discontinue service "where negligent or wasteful use of water exists" if the practices have not been remedied within 5 days of giving the customer written notice to such effect.[2]

In addition, the voluntary and mandatory water rationing programs that have been adopted by the District and by the affected cities during past droughts have all contained prohibitions against waste. These ordinances have been specific in their definition of wasteful practices and are easier to implement and enforce. These provisions are discussed in greater detail in the *Water Shortage Contingency Plan,* section VII, of this report.

IMPLEMENTATION: Cal-Am will continue to enforce Rule 11 and will enforce any future water waste prohibitions that are implemented pursuant to a voluntary or mandatory water-rationing plan.

---

[1]City of Imperial Beach, Ordinance 813, §7, July 5, 1990; City of Coronado, Ordinance 1761, §6, June 19, 1990.

[2]California-American Water Company, Rule No. 11, § B. 3. a., effective July 6, 1993.

14. DMM 14. ULTRA LOW FLUSH TOILET REPLACEMENT (BMP 14)

BMP 14: Implementation shall consist of at least the following actions:

Implementation of programs for replacing existing high-water- using toilets with ultra-low-flush toilets (1.6 gallons or less) in single family and multi-family residences. Programs shall be at least as effective as requiring the replacement at the time of resale .

As described in section B, 5, (above) Cal-Am has operated a ULFT rebate program for single-family residences since 1991. Rebates are $75 for the first toilet and $50 for up to two additional toilets. Over 3,000 fixtures have been replaced under this program, resulting in a permanent demand reduction of over 25AFY.

In addition to this program, all new construction, since 1992, has included ultra-low flow plumbing fixtures in accordance with State law.

IMPLEMENTATION: Cal-Am has sought the continuation of this program on a year-by-year basis, and will continue to do so at a funding level equal to or greater than past levels.

15. WASTEWATER RECLAMATION.

Wastewater collection within the Coronado District's service area is undertaken by the respective Cities (Coronado, Imperial Beach, San Diego and Chula Vista) while wastewater treatment and disposal is provided by City of San Diego's Metropolitan Wastewater Department. Currently, the wastewater flows to the Point Loma Wastewater Treatment Plant located along the coast near the mouth of San Diego Bay.

Some of the wastewater generated within the Coronado District's service area is diverted to San Diego's South Bay Water Reclamation Plant, which opened in 2002. The plant is located in the very southern part of the County, near the border with Mexico and has the capacity to treat 15 mgd. Today approximately 1.25 mgd is supplied to existing customers, and by 2007 an additional 6 mgd will be supplied to the Otay Water District for use in areas of eastern Chula Vista that are served by Otay. The Otay Water District will be constructing a 30-inch transmission pipeline from the South Bay Water Reclamation Plant to its service area where a network of recycled water distribution pipelines is partially in place and will be expanded as

new subdivisions are built.[1] Additional potential customers include the Sweetwater Authority, which serves National City and portions of Chula Vista, (east of the Coronado District). Sweetwater would primarily supply the recycled water to a proposed power plant project, although other irrigation and industrial uses are contemplated. At the present time, the City of San Diego is not planning any recycled water transmission pipelines that would serve portions of the Coronado District, and there are no plans to supply recycled water to users within Cal-Am's service area.

IMPLEMENTATION: Cal-Am will support the City's efforts to expand the availability of reclaimed wastewater in the South County area.

D. IMPLEMENTATION PROGRAM AND SCHEDULE

Table 9 summarizes Cal-Am's implementation program for the *Urban Water Management Plan.* The implementation program is based on a six-year time horizon, beginning with 2006. The schedule is intended to provide general guidance to the Company for the enactment of the water conservation programs described in this report. The Company will maintain full flexibility in funding and scheduling the various programs, and the implementation schedule may be modified as a result of new developments or changes in conditions. As required by State law, the entire plan will be reviewed after five years.

---

[1] City of San Diego Water Department, *Water Reuse Study 2005,* Interim Report, pps.3-7 to 3.9.

TABLE 9

IMPLEMENTATION PLAN SUMMARY

BMP #	*Program*	*2006*	*2007*	*2008*	*2009*	*2010*
1	Single- and Multi-family Water Survey Programs	-	-	-	-	-
2	Residential Plumbing Retrofit	O	O	O	O	O
3	Systemwide Water Audits	NA	NA	NA	NA	NA
3	Leak Detection	O	O	O	O	O
4	Metering with Commodity Rates	O	O	O	O	O
5	Large Landscape Conservation	D	D	O	O	O
6	High Efficiency Washing Machine Rebates	O	E	-	-	-
7	Public Information Program	O	O	O	O	O
8	School Programs	O	O	O	O	O
9	Commercial and Industrial Water Conservation	O	E	O	O	O
10	Wholesale Agency Assistance	NA	NA	NA	NA	NA
11	Conservation Pricing	O	O	O	O	O
13	Water Waste Prohibition	O	O	O	O	O
14	Residential ULFT Replacement	O	O	O	O	O
-	Wastewater Reclamation	-	-	-	-	-

Key to Symbols

D = Develop Program

O = Ongoing Program from Previous Plan or Before

E = Expand Program

NA = Not Applicable

- = No Program