CHAPTER 4 - WATER CONSERVATION PROGRAM

4.1 OVERVIEW

Conservation within the WFA service area is an important component of water resource management for all of WFA's member agencies as well as for the rest of the Chino Basin and Santa Ana watershed.

Imported water purchases made by WFA provide core funding for the regional conservation program in which its member agencies participate. A $4 surcharge is currently paid by WFA for each acre-foot of imported water purchased. This funding supports an array of conservation programs and education activities that are implemented by the WFA member agencies through the Regional Water Conservation Partnership in collaboration with IEUA, the Cucamonga Valley Water District, Fontana Water Company, San Antonio Water Company, Chino Basin Watermaster and the Chino Basin Water Conservation District.

The cities of Ontario and Upland and the Monte Vista Water District within the WFA, along with IEUA, are signatories to the Memorandum of Understanding (MOU) regarding Urban Water Conservation in California and are members of the California Urban Water Conservation Council (CUWCC). IEUA and the regional Water Conservation Partnership have made the 14 Best Management Practices (BMP's) the cornerstone of their respective conservation programs and a key element in the overall water resource management strategy for the area.

Members of the CUWCC are required to provide BMP "Activity Reports" every two years. These reports provide specific details of IEUA's efforts to implement each particular BMP. The BMPs are functionally equivalent to the Demand Management Measures (DMM) written in Water Code Section 10631 of the Urban Water Management Planning Act (Act). The Act requires an agency to describe each of the DMMs that have been implemented unless the agency is a signatory to the MOU. The Act allows an agency to provide the BMP Activity Report in-lieu of describing each of the DMMs. IEUA has recently written a Water Conservation Long-Term Business Plan that is outlined in Chapter 4 of the IEUA 2010 UWMP. This section outlines the historical programs and related water savings, as well as the future programs and projected savings. This chapter also serves as an assessment of WFA's present and proposed future measures, programs, and policies to help achieve the water use reduction requirements imposed on urban retail water suppliers under SBX7-7.

4.2 COMMITMENT TO CONSERVATION

Water Conservation programs are a significant part of the WFA's Water Resources Program and, in light of that, the WFA members recognized early on that water conservation would play a fundamental role in sustaining and meeting future water supply needs.

In September 1991, IEUA became one of the first water agencies to sign the California Urban Water Conservation Council's (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation (MOU), accepting and supporting to implement a prescribed set of urban water conservation Best Management Practices (BMPs).

As the regional wholesale supplier of water for the area, IEUA has assumed the role of coordinating the region's activities and programs over the last ten years to reduce demand. IEUA has worked closely with the WFA members to facilitate the installation of thousands of water saving devices throughout the region and develop a long term business plan that provides a roadmap for the next five years.

The WFA is committed to promoting and implementing measures that will save water within its service area. That is why the WFA makes implementing the BMPs the cornerstone of its conservation programs and a key element in the overall regional water resource management strategy for the region.

Moving forward, the WFA will continue to implement active and code-based BMP related activities utilizing strategies identified in the recently completed long term business plan and as set forth by IEUA's BMPs. The WFA and other IEUA member agencies have agreed to implement parallel programs that have complementary approaches. The strategies identified seek to leverage assets through regional funding opportunities, inter-agency partnerships, and grants in order to provide a greater return on the region's investment in conservation and maintain financially sustainable conservation programs.

4.3 LEGISLATIVE AND REGULATORY REQUIREMENTS

The strategies and programs included in this Chapter have been prepared to meet the compliance requirements of the following, except to the extent those WFA member agencies will individually comply with these requirements:

- California Urban Water Conservation Council's Best Management Practices
- Assembly Bill 1420-Implementation of Demand Management Measures
- Senate Bill X 7-7-Governor's call for 20% per capita water use reduction by 2020

California Urban Water Conservation Council

The California Urban Water Conservation Council (CUWCC) was created to increase efficient water use statewide through partnerships among urban water agencies, public interest organizations, and private entities. The CUWCC's goal is to integrate voluntary urban water conservation Best Management Practices (BMPs) into the planning and management of California's water resources.

A Best Management Practice (BMP) means a policy, program, practice, rule, regulation or ordinance, or the use of devices, equipment or facilities, which meets either of the following criteria:

a) An established and generally accepted practice among water suppliers that results in more efficient use or conservation of water;

b) A practice for which sufficient data are available from existing water conservation projects to indicate that significant conservation or conservation related benefits can be achieved; that the practice is technically and economically reasonable and not environmentally or socially unacceptable; and that the practice is not otherwise unreasonable for most water suppliers to carry out.

Implementation

"Implementation" means achieving and maintaining the staffing, funding and, in general, the priority levels necessary to achieve the level of activity called for in the descriptions of the various BMPs and to satisfy the commitment by the signatories to use good faith efforts to optimize savings from implementing BMPs as described in the MOU entered by CUWCC members.

The BMPs listed below are incorporated into the MOU:

RETAILER BMPS			***WHOLESALER BMPS***	
Foundational			***Foundational***	
BMP 1	**Utility Operations**		BMP 1	**Utility Operations**
BMP 1.1	Conservation Coordinator		BMP 1.1	Conservation Coordinator
BMP 1.2	Water Waste Prevention		BMP 1.3	Wholesale Agency Assistance Programs
BMP 1.4	System Water Audits, Leak Detection and Repair		BMP 1.4	System Water Audits, Leak Detection and Repair
BMP 1.5	Metering with Commodity Rates For All New Connections and Retrofit of Existing Connections		BMP 2	**Education Programs**
BMP 1.6	Retail Conservation Pricing		BMP 2.1	Public Information Programs
BMP 2	**Education Programs**		BMP 2.2	School Education

BMP 2.1	Public Information Programs
BMP 2.2	School Education

Programmatic	
BMP 3	**Residential Programs**
BMP 3.1	Residential Landscape Water Survey Program
BMP 3.2	Residential Leak Assistance Program
BMP 3.3	High Efficiency Clothes Washers
BMP 3.4	WaterSense Specification Toilets
BMP 4	**Commercial, Institutional, Industrial**
BMP 5	**Landscape**

Assembly Bill 1420 (Laird/Feuer)

Effective January 1, 2009, the terms of, and eligibility for, a water management grant or loan made to an urban water supplier and awarded or administered by the department, state board, or California Bay-Delta Authority or its successor agency shall be conditioned on the implementation of the water demand management measures (DMMs). DMMs are equivalent to water conservation measures, programs, and incentives that prevent the waste of water and promote the reasonable, beneficial, and efficient use and reuse of available supplies (CUWCC BMP activities).

The Department of Water Resources (DWR) must consider whether an agency is implementing or has scheduled to implement the DMM activities that an agency has identified in its Urban Water Management Plan in evaluating applications for grants and loans financed by specified bond funds.

The Water Conservation Act of 2009 (SBX 7-7)

Enacted in November 2009, SBX 7-7 establishes a statewide urban per capita water use reduction goals of 20% by 2020 and 15% by 2015. This initiative applies to all urban retail water suppliers directly serving a minimum of 3,000 customers or supplying 3,000 acre-feet or more on a retail basis. Urban retail water suppliers must establish a baseline daily per capita water use (GPCD) and other water use data and report it in their 2010 urban water management plans by July 1, 2011.

WFA's retail member agencies are required to comply with SBX7-7. Because WFA is an urban wholesale water supplier, it is not required to comply with the new requirements that SBX7-7 imposes upon urban retail water suppliers.

Assembly Bill 1881 (2006)

AB 1881 (Laird 2006), the Water Conservation in Landscaping bill, requires certain agencies to update and adopt local landscaping ordinances by January 1, 2010. The adopted landscaping ordinances must be "at least as effective as" the State Model Landscape Ordinance (SMO) developed by the Department of Water Resources.

Key elements in the updated ordinances include: a water budget approach and applies to large, new and redeveloped landscapes which require a permit, reducing the evapotranspiration adjustment factor used in the calculation of a the water budget to at least 0.7, increasing the public's awareness of the importance of water use efficiency in landscaping, requiring Smart Controllers, and adopting and enforcing statewide prohibitions on overspray and runoff. As a wholesale water supply agency, WFA is not required to comply with AB 1881, although the law is being implemented by other agencies throughout WFA's service area.

Summary

The WFA, as an urban wholesale water supplier, is not required to develop a baseline or set reduction targets to achieve a 20% reduction in gallons per capita day by 2020 as written under SB X 7-7. However, as the statute does require urban retail water suppliers to comply, the WFA supports the position taken by IEUA of preparing a regional approach establishing a baseline and setting targets based on regional demands and in support of its eight retail member agencies that must comply. All member agencies within IEUA's service area have agreed to the formation of a regional alliance, and will continue to cooperatively participate in developing programs and meeting water conservation goals (see Chapter 4 of IEUA's 2010 UWMP for additional information regarding the regional alliance for purposes of SBX7-7).

IEUA and its member agencies devised a strategy to meet all compliance requirements in the most cost-effective manner feasible. Below is a chart showing the compliance requirements and associated strategies for each:

Compliance Requirements

Regulatory Agency or State Organization	***Requirements***	***Approach***
20x2020	Reduce per capita water use by 10% by 2015 AND Reduce per capita water use by 20% by 2020	By implementing Active Water Use Programs, Policy Initiatives, and increasing Recycled Water Supply, IEUA and its agencies are projected to be on track to meet per capita water reduction goals for both target years.

CUWCC	Reduce per capita water use by 18% by 2018*	IEUA and its agencies will utilize CUWCC's new GPCD option, which offers a per capita methodology to track compliance. This will align with the requirements of 20x2020 as well.
AB 1420	Fulfill BMP commitments	Lines up with actions taken to meet CUWCC BMP compliance.

As indicated above, IEUA and all of its member agencies are signatories to the Memorandum of Understanding regarding Urban Water Conservation in California and are members of the California Urban Water Conservation Council. As one of the original signatories to the MOU in 1991, IEUA's highest conservation priority has been to ensure that good-faith efforts are made on behalf of the member agencies in implementing Best Management Practices, locally.

Over the last nineteen years, the WFA has been committed to developing and implementing many core regional conservation programs that have been designed on the foundation of BMPs, and these programs continue to serve as a key component in the overall regional water resource management portfolio for the region.

4.4 FIVE YEAR CONSERVATION PLAN

The WFA member agencies recognize that a sound, fact-based plan is needed to guide water use efficiency program implementation over the upcoming years. The WFA and its member agencies, working with other IEUA member agencies, created a Regional Water Use Efficiency Partnership Workgroup and initiated an eight-step process that resulted in the creation of a regional *Water Use Efficiency Business Plan*.

The Plan includes the following information:

- The current water supply situation and usage patterns;
- Specific market opportunities;
- A strategy for reaching water savings goals;
- Recommended programs with budgets, water savings, costs, marketing and operational details;
- A program implementation plan and schedule; and,
- A system for tracking and reporting performance over time.

STRATEGY OVERVIEW

The strategy developed for goal achievement:

- **Target markets with highest water savings opportunity**- Comprising 69% of IEUA's total water demand, landscape usage is the key market to address. Residential landscape water usage, at 66% of the single family consumption, is clearly the prime opportunity for water savings.

  Landscape water reduction for the commercial market is another viable prospect as well with 57-94% of commercial demand. This includes homeowners associations and commercial properties with large landscape areas.

- **Provide program innovation to transform the landscape market** - For years, Southern California water agencies have overlooked outdoor water savings opportunities because retrofit technologies and services were expensive and unreliable. Over the last several years, however, there have been major advancements in product designs and performance. By studying the successes and shortfalls of historical landscape programs, the WFA members and other IEUA member agencies have devised a cost-effective array of programs to capture outdoor water savings.

  Currently, smart controllers, high efficiency sprinkler nozzles and turf removal are the most likely measures to yield water savings in landscaped areas. Since these measures are not well known to most customers, they must be persuaded and enticed to participate. This will be accomplished through offers of free products and free installations whenever cost effective.

  Once the products are well established in the market, it will no longer be necessary to provide them at water agency expense. Today, however, the customer is unlikely to invest in unknown technologies and services unless the offer is "too good to pass up."

- **Secure outside funding for programs**- Grants and funding will be pursued whenever possible in order to drive down the WFA members cost per acre-foot of water saved. There are some funding sources available to the proactive and prepared water agency. Funding sources may include Federal grants offered through the United States Bureau of Reclamation; efficiency grants offered through State agencies such as the Department of Water Resources and the State Water Resources Control Board; and regional grants and incentives offered by the Metropolitan Water District of Southern California (MWD).

IEUA, on behalf of the WFA members, in addition to applying for the competitive offerings of State and Federal agencies, will pursue all MWD incentives and programs available including:

- SoCal Water$mart Program for single family residential water efficient measures.
- Save A Buck Program for commercial water efficient measures

- **Provide sustained education and outreach to customers –** The WFA members will communicate the continued and urgent need for water use efficiency and direct customers to available programs. This will be accomplished through school education, regional public outreach and campaigns, and communication regarding local ordinances.

- **Advocate for State and regionally appropriate rules, regulations and ordinances for the efficient use of water-** Legislation requiring enhanced water efficiency product performance, as well as implementation of local, state, and national ordinances can significantly aid water demand reduction. The WFA members will advocate for responsible passive savings initiatives.

SELECTED PROGRAMS

The selected programs, with their heavy emphasis on landscape opportunities, will integrate the following elements:

- **High Efficiency Nozzle Installations** – Retrofitting pop-up spray heads with high efficiency rotary nozzles is a low cost measure and delivers high water savings. The saturation rate of high efficiency nozzles is extremely low, and the sheer volume of spray heads offers a prime market opportunity.

- **Smart Controllers in Combination with High Efficiency Nozzle Installations for Larger Landscape Sites** – Smart controllers are cost-effective for sites with large landscape areas. By combining controllers with high efficiency nozzles, significant and cost-effective water savings can be achieved.

- **Turf Removal** – Although turf removal delivers extremely high water savings in most retrofit projects, it is not yet deemed cost-effective for IEUA to fund a turf removal "direct" incentive program at this time, unless substantially funded through outside sources. By offering a low interest financing option customers would not be required to pay for up-front costs and should be able to realize substantial water savings. As a result, IEUA will be driving a market

transformation—away from high water use turf and towards regional plants with low precipitation rates and minimal irrigation needs.

- **Water Budgets** – A "water budget" is the calculated amount of water a site would require over a particular time period (usually a month, billing cycle, or year) based on the lot size and local weather conditions. A Water Budget Program would educate customers about their water consumption patterns as compared to their budget. The savvy customer is now armed with a tool to better understand their usage and then independently make modifications to reduce their water use. The program is extremely cost effective because the educated customer makes the changes on their own thereby transforming the market.

- **Landscape Evaluations** – Comprehensive landscape evaluations provide customer education and information on landscape and irrigation system upgrades specific to each individual site. Intended to drive customers to make improvements in their landscape irrigation efficiency, the evaluations will direct customers to SoCalWater$mart, Save A Buck or other customer incentives, as applicable.

- **MWD's SoCalWater$mart and Save A Buck Programs** – These programs are slated to continue for at least three to five years, providing the WFA members with continued outside funding and program administration. Moving forward, IEUA will add additional funding to landscape water use efficiency products to provide increased customer response.

- **Multi-family HET Direct Installation Program** – This program leverages Department of Water Resources (DWR) grant funding, as well as MWD incentives. The program will continue until the DWR grant and MWD funding ends.

- **Education and Outreach Programs** – The WFA members will continue to provide regional educational and outreach programs. Current regional education and outreach programs include the following:

    - National Theatre for Children
    - Garden in Every School
    - Residential Landscape Training Workshops
    - Water Wise Landscape Contest
    - Annual Water Fair

- Water Education Water Awareness Committee
- Regional Water Use Efficiency Outreach
- No Water Waste Ordinance

On an annual basis, the WFA members and other IEUA member agencies will review the effectiveness and desirability of regional educational and outreach programs. Budget priority will be given to programs that assist member agencies in meeting state mandates.

4.5 VALUE OF CONSERVATION

Over the last five years, the WFA members and other IEUA member agencies have developed a strong partnership and a coordinated approach to conservation management measures that reduce water use. Conservation has multiple benefits, one of which is the value of conservation to the region's ratepayers. Conservation saves money to the ratepayer.

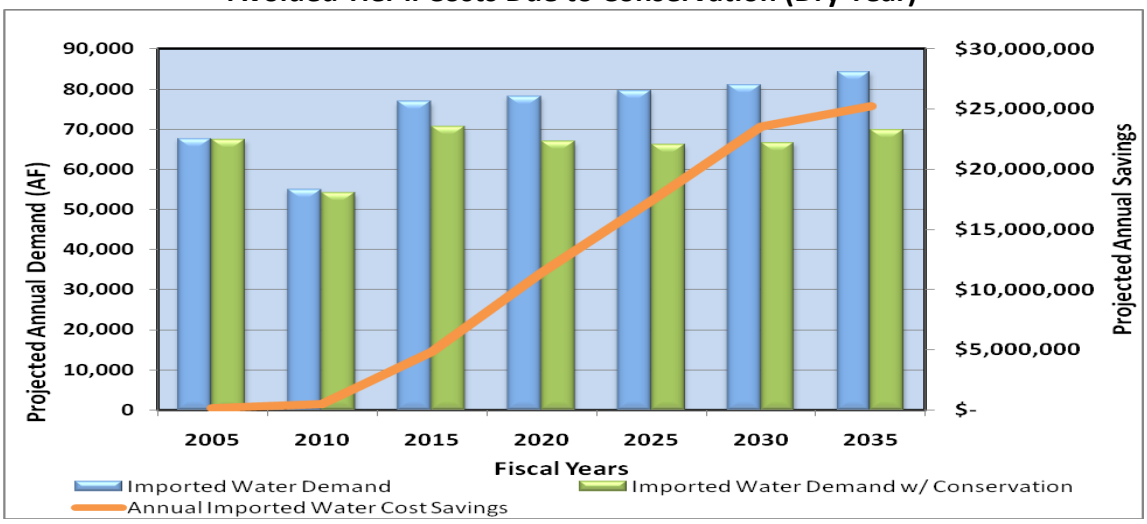
The WFA members and other IEUA member agencies developed a strong working accord and accomplished the following as a result of the planning process:

- Agreement on a regional strategy to focus on landscape water use efficiency as well as a portfolio of regional programs;
- Completion of a documented plan that provides the implementation steps necessary to launch the programs as well as clearly defined roles/responsibilities between the WFA members, IEUA and other IEUA member agencies; and,
- Commitment from IEUA to administer the regional programs with retail agencies responsible for implementing and possibly augmenting programs within their individual service areas.

Many agencies may need to develop an individual plan for their own agency in order to understand their specific compliance requirements and to address the local needs of their respective service areas.

Figure 4-1 shows the projected cumulative amount of "new" water that is projected to be conserved over the next twenty-five years (not including saved prior to 2005) and how that affects the WFA members and the other IEUA member agencies financially. The avoided imported water purchases, at MWD's Tier II rate, are projected to be more than 60,000 AF which is equivalent to more than $83 million saved.

Figure 4-1
Avoided Tier ll Costs Due to Conservation (Dry Year)



Source: Conservation projections from Table 2-4 & MWD's Long Range Finance Plan and MWD staff projections

Below is a summary of some of the additional benefits of conservation:

- Ratepayers save money on their water utility bills;
- Reduced urban runoff from improved irrigation efficiency;
- Avoidance of purchasing additional expensive imported water; and
- Environmental benefits

Another regional benefit for maintaining a strong support for conservation is the reduced dependence on imported water from the California Bay-Delta (Bay-Delta). The Bay-Delta is one of the most important links in California's water supply system. Two major water supply projects, the State Water Project (SWP) and the Central Valley Project convey Bay-Delta water to more than 22 million Californians and 7 million acres of farmland. The WFA service area receives a significant portion of its supply (about 30 percent) from the SWP via Metropolitan Water District. Local water supply projects such as conservation help limit the amount of water taken out of the Bay-Delta for water supply, thus enhancing Bay-Delta water supply, water quality and environmental protection. Conservation also helps increase irrigation efficiency which reduces runoff and the associated damage to the asphalt of roads and parking lots that can be very expensive to repair.

Finally, conservation also benefits the region through energy savings. Whenever water moves from one point to another, energy is involved. Electricity to pump water is the single greatest use of power in the state amounting to about 19 percent of all power used in California. When water deliveries are reduced, significant energy is saved.