

Goleta Water District 2010 Water Conservation Plan

Introduction

On December 23, 1994, Goleta Water District (GWD or District) became a signatory to the California Urban Water Conservation Council (CUWCC) Memorandum of Understanding Regarding Urban Water Conservation in California (MOU). In December 2008, the CUWCC restructured the MOU Best Management Practices (BMPs) and updated compliance requirements to begin in July 2009. In addition, there are State requirements for water agencies to implement water conservation measures at least as effective as the CUWCC BMPs. The Goleta Water District is also in the process of restructuring and updating the operating budget. For these reasons, this Water Conservation Plan is proposed as an interim plan. The purpose of the plan is to provide guidelines for implementing the Best Management Practices in FY 2010-2011. The plan will need to be revised at least biennially to meet the coverage requirements of the BMPs over time and to maintain compliance with the targets set forth in the upcoming 2010 Urban Water Management Plan.

Water Conservation Goals and Program Needs

The main goal of the Water Conservation Program will be to comply with the CUWCC MOU and the implementation of BMPs. The Goleta Water District is planning to restructure staff in order to maintain a Water Conservation Program that will meet the BMP requirements.

Additional goals of the Water Conservation Program will be to:

- Determine:
 - *Who* are the water users (customers) that should be targeted for water efficiency measures (e.g. commercial, residential, agricultural)?
 - *What* are the legal requirements for conservation and estimated water volumes that could be saved from conservation and associated program costs?
 - *Where* will these savings be achieved (e.g., indoor and outdoor) and which ones are a priority (i.e., top users to target)?
 - *When* can these water savings be realized (short-term, long-term)?
 - *How* will these demand reductions be realized—from what specific conservation incentives and programs?
- Assess Goleta's water conservation program's activities and results to date, including previously and currently implemented Best Management Practices (BMPs) and other water conservation programs (e.g., residential audits and retrofits, toilet rebates) and incentives (e.g., public education, watering restrictions, water rate structure).
- Identify water conservation stakeholders as well as opportunities to partner elements of Goleta's water conservation program with local green building and

energy-conservation programs where such partnerships offer strategic and economic benefits to furthering Goleta's conservation program goals.

The District seeks to address its long-term water management challenges with the following goals for its Water Conservation Program:

- **Policy.** *Support the Memorandum of Understanding regarding Urban Water Conservation in California (MOU) and its associated Best Management Practices (BMPs) as well as other state conservation programs and policies.*
- **Supply Constraints.** *Save water.* Reduce avoidable water waste, inefficiencies and unnecessary losses, by both customers and the water system, so that the District can continue to meet the service area's water needs-within its water supply and infrastructure constraints-for the foreseeable future.
- **Drought.** *Adapt to changing climate patterns* and reduced precipitation, recognizing that new scientific findings such as tree ring analysis are altering scientific assumptions about California's (and the West's) historical drought patterns. Dry periods that were previously classified as "drought" may be reclassified as 'normal" in the years ahead.
- **Security.** *Increase available water storage* through improved water use efficiency to enable GWD to have the necessary water supply capabilities to support essential civilian and military responses terrorist and catastrophic events that could disrupt supplies and significantly increase water demands for emergency response activities (i.e. hazardous materials response, decontamination, explosion, fire, and related).
- **21st Century Approach.** *Enhance and update the conservation program* to reflect state-of-the-art water saving approaches, new technologies and practices, including Green Building standards (LEED®), pollution prevention goals, and a conservation rate structure, such as a tiered rate structure.
- **Environment.** *Promote ecologically based and healthy water use*, including water-efficient home, commercial, landscape and farm water use that also helps reduce unnecessary pollution outputs and runoff as well as avoidable degradation of streams and wildlife habitat (i.e. peak water demands).
- **Community and Open Space Preservation.** *Maintain community quality of life and open space preservation goals*, such as sustainable cities and farmland preservation programs.
- **Public Credibility.** *Act to support and implement a comprehensive set of water conservation measures* that will result in measurable and significant water savings, thereby demonstrating to the public the District's commitment to an efficient and environmentally sustainable water system.

These additional goals will be researched and explored as time permits outside of implementing the CUWCC BMPs.

BMP Implementation

Goleta Water District will attempt to implement the following Best Management Practices set forth in the CUWCC Memorandum of Understanding (MOU). The BMPs are outlined below. Much of this language is taken directly from the MOU. Bullet points represent estimated staff time and/or cost of implementing each BMP and are focused at implementation in fiscal year 2010-2011. These projections will need to be adjusted in future years.

1. UTILITY OPERATIONS PROGRAMS

1.1 Operations Practices

1) Conservation Coordinator (*formerly BMP 12*)

Staff and maintain the position of trained Conservation Coordinator and provide that function with the necessary resources to implement BMPs.

- This position shall be maintained by the Water Conservation Supervisor/Public Information Officer of Goleta Water District. It is estimated that the staff time for oversight and direction of the Conservation staff will be approximately 664 hours per year.

2) Water-waste prevention (*formerly BMP 13*)

Water Agency shall do one or more of the following:

a. Enact and enforce an ordinance or establish terms of service that prohibit water waste; b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development; c. Support legislation or regulations that prohibit water waste; d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures; e. Support local ordinances that prohibit water waste; f. Support local ordinances that establish permit requirements for water efficient design in new development

- GWD Code Section 6.20.070, Waste of Water, prohibits customers from wasting water. Staff will work to draft an update of this section of the code such that it will be enforceable. Staff will also research the feasibility of implementing the other suggested waste prevention methods listed above as well as the possibility of supporting local ordinances that establish permit requirements for water efficient design in reconstruction.
- The first step of drafting a revision is estimated to take approximately 40 hours of staff time by the conservation coordinator.

1.2 System Water Audits, Leak Detection & Repair (*formerly BMP 3*)

Implementation of this BMP shall consist of:

- 1) Standard Water Audit and Water Balance. Perform annually using the AWWA Water Loss software to determine the current volume of apparent and real water loss and the cost impact of these losses on utility.
- 2) Validation. Each year for four years, develop a validated data set for all entries of the water audit and balance following the methods suggested by the AWWA Software to improve the accuracy of the quantities for real and apparent losses.
- 3) Economic Values. Estimate the economic value of real loss recovery based upon the avoided cost of water using by the Council's adopted Avoided Cost Model.
- 4) Component Analysis. Once every four years, analyze apparent and real losses and their causes by quantity and type to identify volumes of water loss, the cause of the water loss and the value of the water loss for each component.
- 5) Interventions. Reduce cost-effective real losses. Staff will refer to the AWWA Manual, Water Audits and Loss Control Programs (2009) for specific methods to reduce system losses.
- 6) Customer Leaks. Staff will implement GWD Code Section 6.20.070 and continue to advise customers when it appears that possible leaks exist on the customer's side of the meter. Conservation staff will work with Administration staff to notify customers expeditiously when it appears that they may have a leak and review the automatic triggers to determine if they can be modified to be more stringent. They will also work with Operations staff to develop/modify the door tag procedure for notifying customers of excess use while in the field or reading meters.
 - BMP 1.2 is estimated to take approximately 80 hours per year.

1.3 Metering (*formerly BMP 4*)

Conservation staff will develop a feasibility study examining incentive programs to move landscape water uses on mixed-use meters to dedicated landscape meters. Conservation staff will also work with Operations staff to develop a written plan, policy or program that includes a census of all meters, a schedule of meter testing and repair, and a schedule of meter replacement.

- BMP 1.2 is estimated to take approximately 100 hours.

1.4 Conservation Pricing (*formerly BMP 11*)

BMP 1.4 is intended to reinforce the need for Water Agencies to establish a strong nexus between volume-related system costs and volumetric commodity rates and provide an economic incentive to customers to use water efficiently. The conservation coordinator will work with GWD Administration staff to confirm that the following proportion of water revenue is met:

$$V/(V+M) \geq 70\%$$

Where V=annual volumetric revenues & M= annual meter/service fee revenues

- BMP 1.2 is estimated to take approximately 40-80 hours in years when rates are proposed to be adjusted and 8 hours in the other years.

2. EDUCATION PROGRAMS

2.1 Public-Information Programs (*formerly BMP 7*)

Staff shall implement a public information program consisting of the following:

- 1) Contacts with the public at least four times per year. One point of contact will be a large event such as the California Lemon Festival in Goleta. Others will include billing messages, billing inserts, and newsletter articles.
- 2) Contacts with media at least four times per year.
- 3) Maintain and update website at least once per quarter.

Staff will also submit a description of public outreach events and materials to the CUWCC as well as report the annual budget for public outreach programs.

- BMP 2.1 is estimated to take approximately 473 hours per year with an annual materials cost of about \$23,380.

2.2 School Education Programs (*formerly BMP 8*)

Staff will maintain a school information program consisting of:

- 1) Curriculum materials developed and/or provided by GWD, with confirmation that materials meet state education framework requirements and are grade-level appropriate.
 - 2) Distribute materials to K-6 students and if possible to grades 7-12 as well.
- Staff will also submit a description of these materials and all education programs to the CUWCC as well as report the annual budget for school education programs.

- BMP 2.2 is estimated to take approximately 209 hours per year with a cost of about \$1,020 in educational materials.

3. RESIDENTIAL

Staff will implement residential programs including the following:

1) Residential assistance program (*formerly BMPs 1 & 2*)

- GWD staff will perform Water Checkups for 1.5% of single family residential (SFR) and 1.5% of Multifamily Residential (MFR) accounts per year for ten years, then 0.75% of each account class per year afterward to reach the BMP goal. This equates to about 197 SFR accounts and 23 MFR accounts per year. It should be noted that MFR accounts have many more units per account and thus take longer to complete.
- Staff will look into the feasibility of providing water audits on weekends, so that customers who work during the workweek may take advantage of this service.

- Each home is provided with water saving materials such as a showerhead and brochures. These materials are estimated to cost about \$2,364 per year

and the staff time is estimated to be approximately 1203 hours per year to meet the coverage requirement of this BMP.

2) Landscape water survey (*formerly BMP 1*)

- Landscape Water Surveys are performed at each Water Checkup. As such, the coverage requirement for landscape water surveys are accounted for in the numbers outlined above.

3) High-efficiency clothes washer incentives (HECWs) (*formerly BMP 6*)

-GWD is to provide financial incentives to purchase HECWs with an average water factor of 5.0 to 1% of SFRs each year for a period of ten years.

- With a \$50 rebate to 197 SFR accounts, this BMP is estimated to cost \$9,850 per year and take about 103 hours of staff time for advertising and processing.

4) WaterSense Specification (WSS) toilets (*formerly BMP 14*)

-Provide financial incentive for WSS toilets until demonstrated that the level achieved is equal to the savings through a retrofit on resale program, or saturation of 75% is demonstrated. In the first year, GWD will offer fifteen \$50 rebates for WaterSense toilets. In this year, staff will bring language to a board committee to discuss the feasibility of implementing an ordinance to retrofit toilets on resale, reconstruction, and/or billing change.

- Staff will research the feasibility of implementing a toilet retrofit on resale, remodel, and/or change in billing name ordinance.
- This BMP is estimated to take approximately 60 hours and \$1,500 for rebates in the first year.

5) WaterSense Specifications for residential development

-Provide incentives or ordinances requiring residential construction meeting WSS for SFR & MFR housing. In the first year, staff will present to a board committee a proposal to 1) offer a recognition program for residential construction meeting WSS for single-family and multi-family housing until a local, state or federal regulation is passed requiring water efficient fixtures and 2) analyze the feasibility of implementing an ordinance requiring Water Sense Specifications for new development.

- The time for this BMP is accounted for in BMP 1.1.

4. COMMERCIAL, INDUSTRIAL, AND INSTITUTIONAL (CII) (*formerly BMP 9*)

To meet this BMP the District must save 10% of the baseline CII water use (in 2008) over a 10 year period by:

1) Implementing measures on the CII demonstrated savings list (provide rebates for):

1. High Efficiency Toilets
2. High Efficiency Urinals

3. Ultra Low Volume Urinals
 4. Zero Consumption Urinals
 5. Commercial High Efficiency Single Load Clothes Washers
 6. Cooling Tower Conductivity Controllers
 7. Cooling Tower pH Controllers
 8. Connectionless Food Steamers
 9. Medical Equipment Steam Sterilizers
 10. Water Efficient Ice Machines
 11. Pressurized Water Brooms
 12. Dry Vacuum Pumps
- 2) Implement unique conservation measures to achieve the agency's water savings goals. The 10-year savings estimate to meet this BMP is 220 acre-feet total, or a savings of 22AF/year. Rebates for the various fixtures listed above are estimated to cost about \$1000 for each acre-foot of savings. In addition, water checkups will be required to analyze the type of fixtures needed and confirm installation of the fixtures.
- BMP 4 is estimated to take approximately 150 hours and cost about \$20,000 in rebates per year.

5. LANDSCAPE (*formerly BMP 5*)

- 1) For accounts with Dedicated Irrigation Meters, staff will:
 - a) Assign water budgets based on ET
 - b) Provide monthly notices to these accounts
 - c) Offer site-specific technical assistance to accounts 20% over budget
- 2) For Commercial/Industrial/Institutional (CII) accounts with Mixed-Use Meters
 - a) Develop and implement a strategy targeting and marketing large landscape water-use surveys to CII accounts with mixed-use meters
 - b) In un-metered service areas, actively market landscape surveys to existing accounts with large landscapes, or accounts with landscapes which have been determined by the purveyor not to be water-efficient
- 3) Offer financial incentives to support 1) and 2) above.
 - BMP 5 is estimated to take approximately 1225 hours and \$158 in postage to implement in the first year. GWD has received a portion of a very large USBR grant to offer \$48,000 in rebates to customers. The staff-time match for this grant is about 613 hours for the first year and 247 hours the second year.

It should be noted that BMP 3, 4, and 5, have the option of using the Flex Track menu. This will be an option where a water agency will have the option of implementing a unique water conservation measure in lieu of the standard BMP as long as the savings are quantified and equal to the savings that would have been achieved through implementation of the standard BMP.

Conclusion

The GWD Water Conservation Program will plan to implement the CUWCC BMPs as outlined above. As time permits outside of implementing the BMPs, the additional goals will be researched and explored in order to adjust the program targets and possibly implement a flex track option.