

Water Conservation Implementation Plan
For the
Los Osos Wastewater Project



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County of San Luis Obispo

WATER CONSERVATION IMPLEMENTATION PLAN

For the
Los Osos Wastewater Project

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List of Key Acronyms

CDP	Coastal Development Permit
County	San Luis Obispo County
gpf	gallon per flush
gpm	gallon per minute
HET	High Efficiency Toilet
Project	Los Osos Wastewater Project

List of References

- 1) Coastal Development Permit, Condition 99 and Special Condition 5b
- 2) Final 2010 Water Demand Analysis and Water Conservation Evaluation, Maddaus Water Management, February 2011
- 3) Toilet Retrofit Program Data 2003-2004 from LOCSO provided by Dan Gilmore December 2011

Executive Summary

Project Overview and Budget:

The County of San Luis Obispo (County), as part of the Los Osos Wastewater Project (Project) and coordination with the Los Osos Water Purveyors and development of a groundwater basin management plan, is implementing a water conservation program within the Wastewater Service Area. In addition to reducing wastewater flows and associated treatment costs, water conservation measures will be implemented by the County and the Water Purveyors to maintain a sustainable water supply source into the future.

The Coastal Development Permit (CDP) approved by the California Coastal Commission in June 2010 imposed water conservation requirements on the County in connection with approval of the project. Condition 99 and Special Condition 5b of the CDP permit requires the County to implement a water conservation program, in consultation with the Los Osos Water Purveyors, within the Wastewater Service Area (see Figure 1) for the Los Osos community. The County is required to provide 5 million dollars of funding towards the water conservation program. This Water Conservation Implementation Plan outlines the actions to achieve the measures of the Water Conservation Program, Condition 5b of the CDP, which is part of CDP Condition 5 Basin Recycled Water Management Plan.

Schedule:

The schedule for the conservation measures included in this plan is tied directly to the current timeline for the Project. The following is the proposed timeline for the construction project:

Collection system:

- June - Sept 2012 – Award contract and start work
- Early 2015 – Construction completed

Water Recycling Facility:

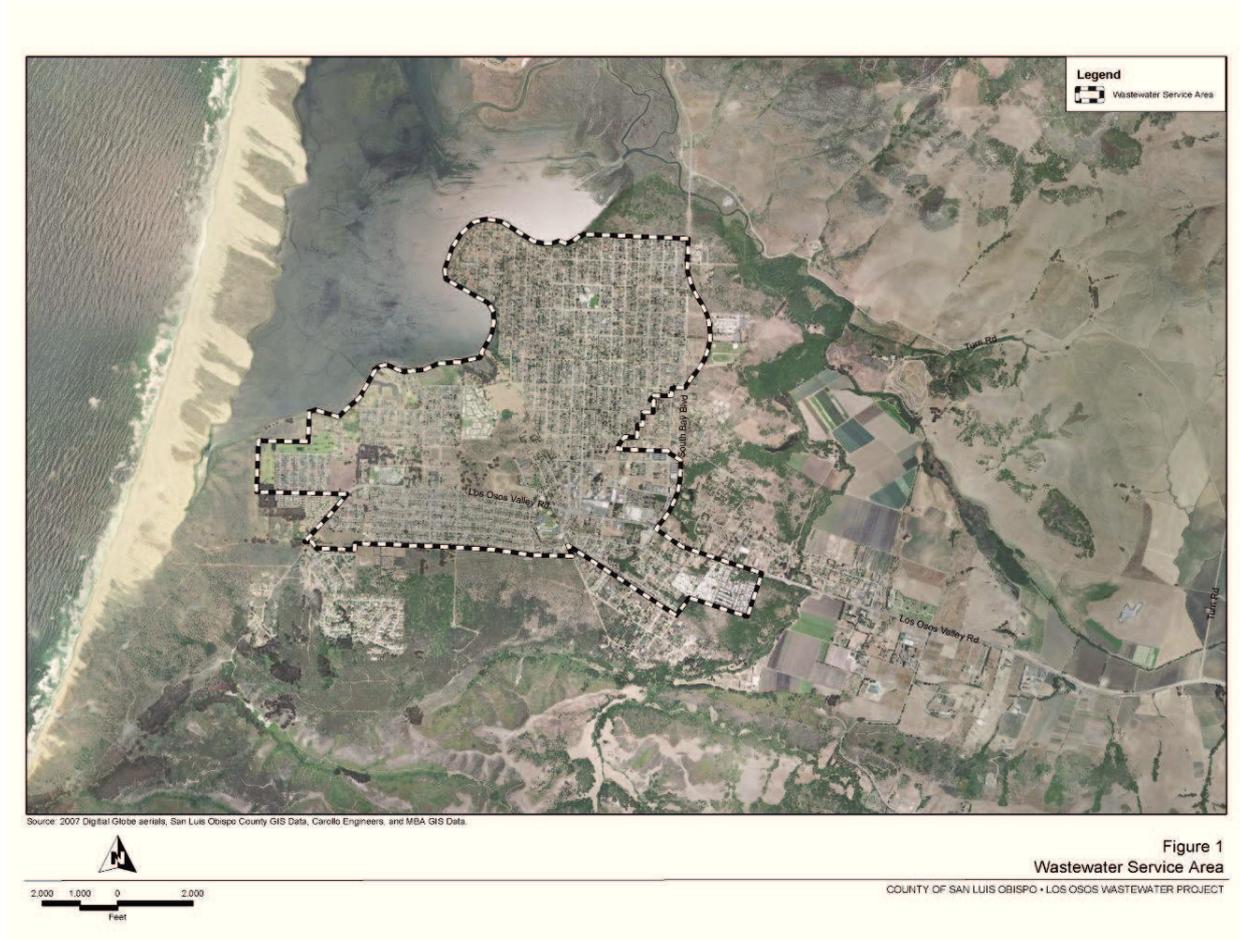
- Present – Mid 2013 – Facility Design
- Fall 2013 – Start construction
- Early 2015 – Construction completed

Completion of both projects is planned by early 2015, after which customers will connect to the Project within 6 to 12 months.

Conservation Measures and Recommended Equipment:

This Conservation Implementation Plan recommends 20 individual measures. Each measure is described in detail within this plan. The goals of all the measures in this plan are the following:

1. Reduce average residential indoor per capita water use below 50 gallons per capita per day.



2. Reduce overall water use to comply with the 2010 County Urban Water Management Plan (UWMP) guidelines to reduce 20 percent of demand by the year 2020 and to maintain a more sustainable water supply in the region.
3. Maintain a flexible program with multiple ways for all customers to participate before their mandated connection to the Project.
4. Encourage early implementation and installation of high efficiency water units.
5. Require existing and new buildings to meet or exceed the current state and federal plumbing code and building code (Cal Green) standards.
6. Recommend technology that is proven and readily / locally available for installations.
7. Encourage coordination of programs and contractors / County staff during installations. Limit visits to customers who participate in the subsidized community program (Measure 1A and 2A), so as to be efficient and organized with resources.

The following table shows the recommended equipment and how it compares to the current federal and state standards. For ease of understanding and consistency among programs, the goal is to have one standard for the entire service area regardless if the structure is existing or new.

Table ES-1 – Recommended Technology

Fixture or Appliance	Recommended for Wastewater Service Area	Federal /California State required Standards	New or Remodeled Structures	Existing Structures*
Toilets – Residential and Commercial	Over 1.6 gpf replaced with 1.28 gpf or less	1.28 gpf	Cal Green Building Code	State Law AB 715
Showerheads – Residential and Commercial	Over 2.0 gpm replaced with 1.5 gpm or less	2.0 gpm	Cal Green Building Code	State Law AB 715
Washers – Residential and Commercial	Tier 3			
Faucet Aerators - Residential	1.5 or less	1.5 gpm	Cal Green Building Code	
Faucet Aerators - Commercial	0.5 gpm	0.5 gpm	Cal Green Building Code	
Urinals - Commercial	0.5 gpf	0.5 gpf	Cal Green Building Code	State Law AB 715
Pre-rinse Spray Valves - Commercial	1.15 gpm	1.6 gpm	Federal Energy Policy Act of 2005	Federal Energy Policy Act of 2005

gpm = gallons per minute. gpf – gallons per flush

*State Law AB 715 takes effect in the year 2014. This law will be in place before the completion of the Project planned for completion in the year 2015 / 2016.

Table ES-2 presents the 20 measures and, the schedule and budget for 10 years. For the report, Year 1 refers to calendar year 2013. Year 10 refers to calendar year 2022.

Table ES-2. Estimated Annual Schedule and Budget for Implementation of Recommended Program Measures Year 1 – 10					
Implementation Program Plan Measure Number	Measure	Customer Category	Program Length	Total Estimated Activities	Total Estimated Budget
Category 1. Residential Programs					
1A	Subsidize Partial Community Retrofit, Residential	Single-Family Residential Toilets	3 Years*	8000	\$2,061,375
		Single-Family Residential Showerheads	3 Years*	8000	\$368,575
		Single-Family Residential Faucet Aerators	3 Years*	13500	\$100,769
1B	Residential Clothes Washer Rebate	Single-Family Residential Washer	5 years	2000	\$385,000
1C	Options for Fully Retrofitted Residences	Hot Water on Demand; Dishwashers,	3 years	500	199,525
1D	Retrofit on Resale	Single-Family Residential: Owners complete retrofits through this ongoing water conservation measure.			\$0
Category 2 - Commercial and Institutional					
2A	Subsidize Partial Community Retrofit, Commercial	Commercial	3 years	141	\$192,223
2B	Replace Restaurant Spray Nozzles	Commercial	3 years	45	\$3,649
2C	Institutional Building Retrofit	Institutional	3 years	13	\$38,588
2D	Commercial High Efficiency Clothes Washer Rebate	Commercial	3 years	40	\$14,280
Category 3 - Education and Outreach Program					
3A	Residential Water Surveys	Single-Family Residential	3years	5000	\$824,250
3B	Commercial, Industrial and Institutional Surveys	Commercial	3 years	141	\$35,102
3C	Public Information Program	Single-Family Residential	10 years	23000	\$220,500
3D	Media Campaign	Single-Family Residential	10 years	7000	\$178,500
Category 4 - New Development (developer pays to implement water conservation measures)					\$0
Contingency for Additional Measures in Years 4-10					\$327,600
Plan Development Cost to Date					\$50,000
Total Funding Commitment					\$5,000,000

Note – The budget is higher in the first few years as an incentive to try to get all replacements completed as quickly and efficiently as possible. The Plan goal is to get all installations finished before the completion of the Wastewater Project.

Section 1.0 Introduction

An indoor water conservation program is necessary for the Los Osos Wastewater Project (Project) in order to reduce wastewater flows and associated treatment costs. The reduction in water demand is also required to help mitigate seawater intrusion and establish a sustainable groundwater basin for the future. The benefits of maintaining sustainable use of the Basin will be enjoyed by all residents of Los Osos and others who rely upon groundwater from the Basin. The County of San Luis Obispo (County), as part of the Project and in coordination with the Los Osos Water Purveyors (Los Osos Community Services District, Golden State Water Company and S&T Mutual Water Company) and development of a groundwater basin management plan, is implementing a water conservation program within the Wastewater Service Area. Conservation of water is just one measure that will be implemented by the County and the Water Purveyors to maintain a sustainable water supply source into the future.

The Coastal Development Permit (CDP) approved by the California Coastal Commission in June 2010 imposed water conservation requirements on the County in connection with approval of the Project. Condition 99 and Special Condition 5b of the CDP permit requires the County to develop a water conservation program, in consultation with the Los Osos Water Purveyors, within the Wastewater Service Area (see Figure 1) for the Los Osos community. The County is required to provide 5 million dollars of funding towards the water conservation program. This Water Conservation Implementation Plan outlines the actions to achieve the measures in the Water Conservation Program, Condition 5b of the CDP, which is part of CDP Condition 5 Basin Recycled Water Management Plan.

1.1 Recycled Water Management Plan

The Recycled Water Management Plan (RWMP) is required by the CDP. This Plan contains four elements: Recycled Water Reuse Program, Water Conservation Program, Monitoring Program, and Reporting and Adaptive Management Program. The RWMP provides the history and background information as it pertains to the Los Osos Groundwater Basin, the Wastewater Service Area, the Project, the ISJ Working Group, and a groundwater basin management plan, amongst other information. As it pertains to the Water Conservation Program, the RWMP provides an overview of the Water Conservation Study, which was prepared by Maddaus Water Management, the results of the study and the recommended measures to be implemented for indoor water conservation. One of the primary goals for the Water Conservation Study was to develop a set of measures that allows the County to meet the CDP's requirement to reduce average residential indoor water consumption below 50 gallon per capita per day (gpcd) within the Wastewater Service Area.

1.2 Water Conservation Study

The ISJ Working Group, which includes the County of San Luis Obispo and the three Water Purveyors within Los Osos (Golden State Water Company, Los Osos Community Services District, and S&T Mutual Water Company), retained Maddaus Water Management (Maddaus) in 2010 to conduct an analysis of potential efficiency improvements on urban water use in Los Osos. An Administrative Review Draft of the 2011 Water Demand Analysis and Water Conservation Evaluation was released on April 5, 2011. The goals of the analysis were to:

1. Create a water demand forecast for the years 2010 to 2035 under certain assumptions.
2. Project the costs and water savings of selected conservation measures for the years 2010 to 2035.
3. Develop a set of conservation programs.
4. Determine when and what combination of the proposed conservation measures would meet the residential indoor water use target of 50 gpcd.

This Water Conservation Implementation Plan uses the April 2011 study as the basis for the chosen measures and their impact on water conservation.

1.3 Goals and Objectives

Aggressive water conservation will help reduce demand on the Basin, mitigate seawater intrusion, and will meet CDP conditions requiring the Wastewater Service Area to meet 50 gallons per capita per day of indoor water use. To that end, this section discusses new water technologies and practices that will be employed by the County within the Wastewater Service Area to achieve the aggressive conservation levels (50 gpcd indoor use) that will be required in Los Osos to ensure the long-term reliability and quality of the community's water supply.

It is anticipated that the Water Purveyors will also incorporate many of these measures in the areas outside the Wastewater Service Area as well as incorporating outdoor water conservation technologies and practices throughout the Los Osos community to further reduce the overall demand within the Los Osos Groundwater Basin.

1.4 Collaboration with Stakeholders

The ISJ Working Group is developing a plan for the management of the Basin and evaluating the steps required to bring the Basin to a safe yield, help mitigate seawater intrusion, and ensure a viable water supply source is available for the future. Although the County is funding and implementing the indoor water conservation measures in the Wastewater Service Area, it will require all parties to be willing participants to ensure that the community is benefiting to the fullest extent from the water conservation efforts being offered. It is anticipated that the Water Purveyors will be implementing similar programs within their service areas. It will be critical that all parties are working together to ensure that the community is receiving the same messages regarding water conservation and that the tools and guidelines that are being developed meet the needs of all parties. It is for this reason that the County is implementing a water conservation plan based on the collaborative effort of the *2011 Water Demand Analysis and Water Conservation Evaluation*.

Section 2.0 Water Conservation Measures

2.1 Overview

As noted in Section 1.0, the ISJ Working Group retained Maddaus Water Management to evaluate numerous water conservation measures and prepare programs that could be implemented by the County of San Luis Obispo to meet the 50 gpcd indoor water use within the Wastewater Service Area. The report also evaluated measures to reduce outdoor water consumption that can be implemented by the Water Purveyors to further reduce water consumption. Detailed information on all the measures and the selection process is provided in Maddaus' report as well as in the RWMP. The County of San Luis Obispo has identified twenty (20) measures that will be implemented within the Wastewater Service Area. The following section will describe, in detail, each of the individual conservation measures to be implemented by County.

2.2 Summary of Water Conservation Measures

The County will implement twenty (20) water conservation measures that will be broken into four categories: Residential, Commercial & Institutional, Educational & Outreach, and New Development (program costs for new development measures will be the responsibility of the developer). Table 2-1 provides a summary of the measures. The detailed costs by measure and by year are presented in Section 3 and individually in the measure descriptions that follow.

2.3 Implementation Plan by Measure

An implementation plan has been developed for each measure. The implementation plan provides sufficient detail for the County, Water Purveyors, and the customers to understand the process of how to implement each measure and what actions are required to meet the goals of the measure. Each implementation page provides the following information:

- Action Item
- Measure Objective and Goals
- Fixtures to be Replaced
- Detailed Measure Description
- Rebate Values
- Measure Implementation Costs
- Approved Manufacturers
- Activities to be Conducted by the County of San Luis Obispo
- Activities to be Conducted by Water Purveyors and Property Owners

- Measure Implementation Target, Schedule, and Cost
- Measure Monitoring, Evaluation and Tracking
- Rebate Values in Surrounding Areas

Table 2-1 Summary of County of San Luis Obispo Proposed Conservation Measures		
Measure ID	Measure Name	Description
Category 1: Residential		
1A	Subsidize Partial Community Retrofit, Residential	Subsidize the replacement of designated fixtures before residential properties connect to the Project. Included in the retrofit would be inefficient toilets (flushing higher than 1.6 gpf), showerheads, and faucet aerators. Fixture upgrades required for property to connect to the Project. Residents with 1.6gpf toilets may optionally retrofit to 1.0gpf or less toilets.
1B	Residential Clothes Washer Rebate	Residential property owners would be eligible to receive a rebate on a new high efficiency clothes washer.
1C	Alternatives for Fully Retrofitted Residences	Existing residences that are currently equipped with 1.28 gpf or less toilets, 1.5 gpm or less showerheads, and 1.5 gpm or less faucet aerators are eligible for alternative options such as water saver dishwashers, hot water on demand units, or additional clothes washer rebates. These rebates cannot be used in conjunction with Measure 1A.
1D	Retrofit on Resale	Comply with current County Ordinance to obtain "Title 8 Water Conservation Certificate" from Planning and Building.
Category 2: Commercial & Institutional		
2A	Subsidize Partial Community Retrofit, Commercial	Subsidize the replacement of designated fixtures before commercial properties connect to the Project. Included in the retrofit would be inefficient toilets, flushing with more than 1.6 gpf, urinals using more than 1 gallon, showerheads, and faucet aerators. Fixture upgrades required for property to connect to the Project.
2B	Replace Pre-Rinse Spray Nozzles	Provide free installation of 1.6 gpm (or lower) flow pre-rinse spray nozzles for the rinse and clean operation in food establishments, grocery stores and other commercial businesses. Fixture upgrades required for property to connect to the Project
2C	Institutional Building Retrofit	A retrofit program in which schools receive grants to replace inefficient fixtures and upgrade irrigation systems. – Fixture upgrades required for property to connect to the Project.
2D	Commercial High Efficiency Clothes Washer Rebate	Commercial property owners would be eligible to receive a rebate on a new high efficiency clothes washer.

Table 2-1, Continued Summary of County of San Luis Obispo Proposed Conservation Measures		
Category 3: Educational & Outreach (In Coordination with Water Purveyors)		
3A	Residential Water Surveys	Conventional indoor and outdoor water surveys for existing single- and multi-family residential customers. Surveys required for property to connect to the Project.
3B	Commercial, Industrial and Institutional Surveys	Conventional indoor and outdoor water survey for commercial customers. Surveys required for property to connect to the Project.
3C	Public Information Program	Public education would be used to raise awareness of conservation measures available to customers.
3D	Media Campaign	Design and run a media campaign, e.g., "20 Gallon Challenge".
Category 4: New Development (Costs associated with New Development measures are the responsibility of the developer. All New Development Measures are to be complied with before a property can connect to the Project)		
4A	Efficient Dishwashers	Modify the Building Code to require efficient dishwashers meeting water efficiency standards.
4B	High Efficiency Clothes Washers	Ensure that an efficient clothes washer was installed before new home or multi-family residential building occupancy.
4C	Hot Water on Demand/Structured Plumbing	Developers to equip new homes or buildings with efficient hot water on demand systems such as structured plumbing systems.
4D	Plumbing for Future Grey Water Use	Drain lines in new single-family homes to be plumbed for future installation of grey water systems.
4E	New Landscape and Irrigation Requirements	Enforce current County Landscape Design Standards for Water Conservation. Those standards specify that development projects subject to design review must be landscaped according to Xeriscape principles, with appropriate turf ratios, plant selection, efficient irrigation systems and smart irrigation controllers.
4F	Smart Irrigation Controllers and Rain Sensors	Developers for all properties of greater than two residential units and all commercial development to provide the latest state of the art SMART irrigation controllers and rain sensors.
4G	Multi Family Submetering on New Accounts	Metering of individual units in new multi-family, condos, townhouses, mobile-home parks and business centers with less than four stories and with water heaters in the units.
4H	Efficient Fixtures in Commercial, Industrial, and Institutional Buildings	High efficiency commercial equipment such as ice machines, food steamers and conductivity controllers to be installed in commercial buildings.

2.4 Fixture Recycling Program

The County will implement a recycling program for toilet, urinal, showerhead, aerator, and pre-rinse spray valve according to Integrated Waste Management Authority guidelines. County will place recycling bins in the community for disposal and recycling purposes. Further details will be coordinated with the County for the disposal of old fixtures.

2.5 Coordination Between Programs

It is recommended that programs be run together to be time and resource efficient and that licensed plumbers who can complete and certify the retrofits be hired by property owners. For example, the following commercial measures can be run in parallel, such that there is a limited amount of site visits to each individual customer.

- Measure 2A: Subsidize Partial Community Retrofit, Commercial
- Measure 2B: Replace Pre-Rinse Spray Nozzles
- Measure 2C: Institutional Building Retrofit
- Measure 2D: Commercial High Efficiency Clothes Washer Rebate
- Measure 3B: Commercial, Industrial and Institutional Surveys

Similarly the following residential programs can be run in parallel:

- Measure 1A: Subsidize Partial Community Retrofit, Residential
- Measure 1B: Residential Clothes Washer Rebate
- Measure 1C: Alternatives for Fully Retrofitted Residences
- Measure 3A: Residential Water Surveys
- Measure 3C: Public Information Program – provide residents information / pamphlets during the survey and inspections

In most cases, customers will hire a licensed plumber to complete the retrofits on their property. The plumber can determine which fixtures need to be replaced, complete and certify the work. Customers can submit the plumber's certification with their rebate form and eliminate the need for a County inspection. In cases where a customer chooses to complete the work themselves, the following simple steps can be used when running programs in parallel:

Step 1: A site visit is scheduled.

Step 2: An inspector would determine the fixtures that qualify for a replacement or rebate from the County and complete a water survey.

Step 3: Items are installed by the customer.

Step 4: Final inspection with rebate documentation will be completed by the County and customer at the time of the final inspection.

Step 5: County will issue rebates to customer within ten (10) days.

The coordination among programs (residential as well as commercial) offers the following benefits:

- Reduces number of site inspections
- Reduces communication time for each individual customer (for visit coordination and answering questions about rebate forms, etc.)
- Simplifies documentation process and number of entries for each customer
- Reduces number of final inspections; the plumber installation certification can eliminate need for inspections
- Reduces number of rebate checks / payments issued (can possibly issue one combined check rather than multiple separate checks)
- Participation in the programs is easier for the customers
- Administration of the program is reduced

1A: Subsidize Partial Community Retrofit, Residential

Action Item

The County will implement a program to replace inefficient toilets, showerheads, and faucet aerators in all residential homes within the Wastewater Service Area.

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient toilets, showerheads, and faucet aerators with new, higher efficiency models. The goal is to replace all toilets flushing more than 1.6 gallons per flush (gpf), showerheads using more than 2.0 gallons per minute (gpm), and faucet aerators using more than 1.5 gpm with higher efficiency fixtures. Compliance with this measure will be a condition for connection to the Project.

Fixtures to be Replaced

- All toilets flushing greater than 1.6 gpf are required to be replaced with toilets flushing 1.28 gpf or less. These replacements are eligible for the rebate program. All toilets flushing 1.6 gpf are not required to be replaced, but may be replaced with a 1.0 gpf or less to qualify for the rebate program.
- All showerheads flowing greater than 2.0 gpm are required to be replaced with showerheads flowing 1.5 gpm or less. These replacements are eligible for the rebate program. All showerheads flowing 2.0 gpm or less are not required to be replaced and are therefore NOT eligible for the rebate program.
- All faucet aerators flowing greater than 1.5 gpm are required to be replaced with faucet aerators flowing 1.5 gpm or less. These replacements are eligible for the rebate program. All faucet aerators flowing 1.5 gpm or less are not required to be replaced and are therefore NOT eligible for the rebate program.

Toilet Definitions

- **Low-Flow:** In the U.S. the maximum flush volume of a toilet is set at 1.6 gallons. Generally speaking, these toilets are called "low-flow", "ultra-low-flow" or some similar term. Up until now, the 1.6 gallon toilet has dominated the marketplace since 1995.
- **High-Efficiency:** Beginning in 1999, manufacturers began introducing what are known as "high-efficiency" toilets, or HETs. HETs are defined as having an effective flush volume of 1.28 gallons or less. The HET category includes both single flush and dual-flush fixtures. They are now required in California in all new construction and permitted remodeling.

Category		
<input checked="" type="checkbox"/>	Residential	
<input type="checkbox"/>	Commercial & Institutional	
<input type="checkbox"/>	Educational & Outreach	
<input type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No
Rebate		
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No
If Yes, Describe: <u>Rebate for each toilet, showerhead and aerator kit</u>		
Schedule: FY 2012-13 to 2015-16		
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1
<input checked="" type="checkbox"/>	Year 3	<input checked="" type="checkbox"/> Year 2
		<input type="checkbox"/> Year 4
		<input type="checkbox"/> Year 5

- **Single Flush:** Single flush HETs are toilets that flush between 0.8 gallons and 1.28 gallons. Today, there are 66 manufacturers offering 550 models of single-flush HETs.

Detailed Measure Description

Due to the impact this measure will have on all customers within the Wastewater Service Area, flexible implementation of this measure is recommended to meet the varying needs. The customer has the following two options to implement this Measure:

Option 1: Customer Purchase

Option 1: Customer Purchase provides the customer with full control of the purchase and installation of approved fixtures and provides a rebate (up to a maximum amount with receipt verification) for the cost of the approved fixtures and/or installation costs. To participate in Option 1: Customer Purchase, the customer would complete the following steps:

1. Initial Inspection and Water Survey – Customer will contact the County and schedule a water survey to verify the number and types of fixtures to be replaced, to identify potential water waste concerns, and provide recommendations for additional water savings. If the property owner uses a licensed plumber for installation, the plumber’s installation report can take the place of this survey.
2. Fixture Purchase – If the customer is required to replace any fixtures, the customer or hired plumbing contractor will purchase the fixtures (toilet(s), showerhead(s), and faucet aerator(s)) from the approved list of qualifying fixture models. This list will be provided to the customer at the time of the Initial Inspection. If the customer’s requested fixture model is not on the approved list, customer must receive approval from the County prior to purchase to ensure the fixture meets the standards and will be eligible for the approved rebate.
3. Fixture Installation – Customer will install the approved fixtures (toilet(s), showerhead(s), and faucet aerator(s)). It is the customer’s option to use a plumbing contractor for the installations or to install the fixtures themselves. Customer, or hired plumbing contractor, will be responsible for disposal of replaced toilets (see Section 2.4 for recommendations for a Toilet Recycling Program).
4. Verification Inspection – Once the fixtures are installed, the customer will contact the County for a verification inspection. The customer will provide the County inspector with appropriate receipts for fixture purchases and/or installation costs. The inspector will provide the customer with an inspection report and will complete their rebate documentation. If the customer uses a licensed plumber for installation, the plumber may complete a certification as verification. The County reserves the right to perform a verification inspection.
5. Rebate Issuance – The County will issue a rebate check following the completion and concurrence of the verification inspection report. See Rebate Value section, below, for details on the approved rebates for Option 1.

Option 2: Bulk Fixture Purchase

Option 2: Bulk Purchase provides the customer with approved fixtures at no cost to the customer. The benefits of the County pre-purchasing a bulk number of fixtures is to obtain a lower retail cost for higher-end fixtures and to ensure the customer is receiving an approved fixture that meets the measure's goals without the customer having the burden of shopping for the fixtures.

Prior to completing the bulk purchase of toilet fixtures, the County may purchase several different makes and models of toilets as test units. The test units would be used to retrofit restrooms in public buildings or businesses that are accessible to the general public. Public outreach for the conservation program would include information about where the test models are located and encourage customers to visit them. An informal survey or rating of the test models would help determine which model of toilet to select for the bulk purchase.

To participate in Option 2: Bulk Fixture Purchase, the customer would complete the following steps:

1. Initial Inspection and Water Survey – Customer will contact the County and schedule a water survey to verify the number and types of fixtures to be replaced, to identify potential water waste concerns, and provide recommendations for additional water savings. If the property owner uses a licensed plumber for installation, the plumber's installation report can take the place of this survey.
2. Fixture Pick Up – If the customer is required to replace any fixtures, the customer or hired plumbing contractor will pick up the free fixtures (toilet(s), showerhead(s), and faucet aerator(s)) from a location in Los Osos established by the County.
3. Fixture Installation – Customer will install the approved fixtures (toilet(s), showerhead(s), and faucet aerator(s)). It is the customer's option to use a plumbing contractor for the installations or to install the fixtures themselves. Customer, or hired plumbing contractor, will be responsible for disposal of replaced toilets (see Section 2.4 for recommendations for a Toilet Recycling Program).
4. Verification Inspection – Once the fixtures are installed, the customer will contact the County for a verification inspection. The customer will provide the County inspector with appropriate receipts for installation costs. The inspector will provide the customer with an inspection report and will complete their rebate documentation. If the customer uses a licensed plumber for installation, the plumber may complete a certification as verification. The County reserves the right to perform a verification inspection.
5. Rebate Issuance – The County will issue a rebate check following the completion and concurrence of the verification inspection report. See Rebate Value section, below, for details on the approved rebates for Option 2.

Rebate Values

All customers within the Wastewater Service Area will be required to replace all inefficient toilets, showerheads, and faucet aerators prior to connection to the Project. The program will start in 2012 and must be completed prior to each property's connection to the Project. The rebate program provides an

incentive to replace fixtures early (during Year 1) by providing rebates sufficient to cover a significant portion of installation costs. The rebate program for each option is provided in Table 1A-1.

			Year 1	Year 2 and 3
Option 1: Customer Purchase	Toilet	Rebate	\$250	\$160
	Showerhead	Rebate	\$40	\$30
	Faucet Aerator	Rebate	\$5	\$5
Option 2: Bulk Fixture Purchase	Toilet	Rebate	\$110	\$0
	Showerhead	Rebate	\$10	\$0
	Faucet Aerator	Rebate	\$0	\$0
Rebate amounts are the maximum rebate, per fixture, for actual property owner (customer) expenses for the purchase price and installation costs of each fixture. Installation costs are only eligible for rebates when installed and invoiced by a licensed contractor.				

Measure Implementation Costs

Measure 1A will require the most funds to implement and track due to the impact to the entire community. To budget for Measure 1A, the following assumptions were made:

- Number of homes in Wastewater Service Area – 5,000
- Number of toilets in Wastewater Service Area – 9,000
- Number of toilets assumed that are higher than 1.6 gpf (60%, conservative estimate) – 5,400
- Number of toilets assumed that are rated at 1.6 gpf and are eligible to upgrade to 1.0 gpf or less – 2,600
- Number of toilets per home – 1.8
- Number of showerheads per home – 1.8
- Number of faucet aerators per home – 3

Based on these assumptions, the cost per home for Options 1 and 2 are provided in Table 1A-2.

Table 1A-2. Estimated Cost Per Home

			# of Units	Year 1		Years 2 and 3	
				Cost per Unit	Cost per Home	Cost per Unit	Cost per Home
Option 1: Customer Purchase	Toilets	Rebate	1.8	\$250	\$450	\$160	\$288
	Showerheads	Rebate	1.8	\$40	\$72	\$30	\$54
	Faucet Aerator	Rebate	3	\$5	\$15	\$5	\$15
	Administrative Costs	County Cost	1	n/a	\$76	n/a	\$76
	Option 1 Estimated Total Cost Per House					\$613	
Option 2: Bulk Fixture Purchase	Toilets	Rebate	1.8	\$110	\$198	\$0	\$0
		County Cost		\$130	\$234	\$130	\$234
	Showerheads	Rebate	1.8	\$10	\$18	\$0	\$0
		County Cost		\$20	\$36	\$20	\$36
	Faucet Aerator	Rebate	3	\$0	\$0	\$0	\$0
		County Cost		\$2	\$6	\$2	\$6
	Administrative Costs	County Cost	1	n/a	\$76	n/a	\$76
	Option 2 Estimated Total Cost Per House					\$568	

Note – For Measure 1A budgeting purposes, it was assumed that all participants will utilize Option 1.

Approved Manufacturers

Only approved fixture make and models will be eligible to qualify for the rebates identified above. These approved fixtures meet the goals of this measure.



Toilets: Recent advancements have allowed toilets to use 20 percent less water than the current federal standard (1.6 gpf), while still providing equal or superior performance. The [WaterSense label](#) is used on toilets that are certified by an independent laboratory testing to meet rigorous criteria for both performance and efficiency. Only toilets that complete the third-party certification process can earn the WaterSense label. All toilets certified by WaterSense are 1.28 gpf or less. Information about WaterSense labeled toilets: <http://epa.gov/watersense/products/toilets.html>

The toilets that are eligible for Measure 1A rebates are provided in the WaterSense toilet list, located here: http://epa.gov/watersense/product_search.html?Category=2

Toilet performance test data is available via MaP test results: <http://www.map-testing.com/>

Showerheads: Conventional showerheads use 2.5 gallons of water per minute (gpm). Showerheads that earn the [WaterSense label](#) must demonstrate that they use no more than 2.0 gpm. The WaterSense label also ensures that these products provide a satisfactory shower that is equal to or better than conventional showerheads on the market. Information about WaterSense labeled showerheads:

<http://epa.gov/watersense/products/showerheads.html>

The showerheads that are eligible for Measure 1A rebates are provided in the WaterSense showerhead list, located here: http://epa.gov/watersense/product_search.html?Category=4

Faucets and Faucet Aerators: WaterSense labeled bathroom sink faucets and accessories (aerators) can reduce a sink's water flow by 30 percent or more without sacrificing performance. Information about WaterSense labeled faucets. http://epa.gov/watersense/products/bathroom_sink_faucets.html

The faucet aerators that are eligible for Measure 1A rebates are provided in the WaterSense faucet aerator list, located here: http://epa.gov/watersense/product_search.html?Category=1

Activities to be Conducted by the County of San Luis Obispo

The administration of Measure 1A will require thorough planning and detailed data tracking to ensure the successfulness of the implementation. The following actions will be completed by the County:

- Set up a recycling program for the replaced toilets and fixtures.
- Train County inspectors on process, eligible fixtures to be replaced, rebate process, etc.
- Create a database to collect all relevant data (see Section 4, Monitoring, Evaluation, and Tracking for items to be included in the database).
- Prepare an inspection/rebate form to be filled out by the customers/plumbing contractors and inspectors to receive the rebates and be in compliance for the Project. The County may perform an inspection to verify eligible fixtures and proper installation of approved fixtures.
- Select sample toilets and a packaged showerhead and aerator kits for “bulk” purchase and have the sample fixtures installed free of charge in various locations for “testing”. County may work with Water Purveyors to offer a water credit to the businesses being used for testing.
- *Optional Activity: Fixture Exchange Day.* The County would specify a day that customers could come and pick up new fixtures in exchange for their inefficient fixtures.
- *Optional Activity: Plumber Initiated Program.* County would prepare an RFQ and conduct a pre-qualification meeting for plumbing contractors. County to review pre-qualification packages and create a list of qualified plumbing contractors to participate in the Plumbers Initiated Program. The County will set up a “training” date for the approved contractors. The County would publish the pre-qualified list of plumbing contractors on the County’s website.

Activities to be Conducted by Water Purveyors and Property Owners

Water Purveyors may provide a similar program to properties outside the Wastewater Service Area, but within the Water Purveyor's service boundary. The Water Purveyors may be requested to offer a water credit to businesses that are used for testing bulk purchased fixtures.

Property owners to select a program option and follow steps outlined above. Property owners will be responsible for paying for any additional costs not covered by the rebates.

Measure Implementation Target, Schedule and Cost

Measure 1A target is to replace all inefficient toilets, showerheads, and faucet aerators with higher efficiency models to reduce indoor water consumption by an estimated 20 to 30 percent. It is estimated that up to 9,000 toilets, 9,000 showerheads, and 15,000 faucet aerators may be replaced as a result of this measure, but taking Measure 1C into consideration, budgetary estimates assume 8,000 toilets will be replaced.

Measure 1A is planned to run from 2012 through 2015, which is approximately one year following the startup of the Project. Customers will be encouraged with financial incentives to complete the retrofits of the fixtures within the first year of the program.

The total estimated cost with contingencies for Measure 1A is \$2,530,719 (Equipment Cost - \$2,151,111, Administration costs - \$379,608). Table 1A-3 provides a summary of the estimated costs per year.

Table 1A-3					Start Up Budget	Program Year 1		Subsequent Years							
	Program Length	YEAR 1 Per Unit Equipment & Installation Cost	Subsequent Years Per Unit Equipment & Installation Cost	Inspection, Rebate Processing, Marketing and Admin Cost	Sept-Dec 2012	Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget	Total Estimated Activities	Total Estimated Budget	Contingency	Total Inspection, Rebate Processing, Marketing and Admin Cost	Total Equipment Cost	Total Budget w Contingency
Single-Family Residential Toilets	3 Years*	\$250	\$160	15%	\$10,000	3,000	\$862,500	5,000	\$920,000	8,000	\$1,792,500	15%	\$309,206	\$1,752,169	\$2,061,375
Single-Family Residential Showerheads	3 Years*	\$40	\$30	15%	\$10,000	3,000	\$ 138,000	5,000	\$172,500	8,000	\$320,500	15%	\$55,286	\$313,289	\$368,575
Single-Family Residential Faucet Aerators	3 Years*	\$5	\$5	15%	\$10,000	4,000	\$23,000	9,500	\$54,625	13,500	\$87,625	15%	\$15,115	\$ 85,653	\$100,769
												Totals	\$379,608	\$2,151,111	\$2,530,719

Measure Monitoring, Evaluation and Tracking

A database will be established to record of the following at each individual residential property:

- Number and flush volume of toilet (greater than 1.6 gpf, 1.6 gpf, 1.28 gpf or 0.8 gpf)
- Number and flow rate of shower heads intalled (1.5 gpm or less)
- Number and flow rate of faucet aerators installed (1.5 gpm or less)
- Manufacturer and model number if available
- Number of contacts (attempts) to reach customer
- Which replacement option did the homeowner select (Option 1 or 2)
- Which plumber did the installation (in case there are customer call backs about issues)
- Follow up inspection results from verification
- Tracking water use in the home before and after installation
- Customer satisfaction with the program
- Budget tracking with spreadsheet or database that is kept up on a regular basis

County to set up a data base to track the above information and periodically issue progress reports so that program can be evaluated quarterly or semi-annually and adjusted as needed to meet goals and schedule.

Rebate Values in Surrounding Areas

Some examples of toilet rebates being offered in other areas follows.

Rebate value for Cal American Water (Monterrey) is \$100 per HET

<http://www.amwater.com/files/CAW%20Rebate%20Application%20%28SAC-Residential%29%207.21.09.pdf>

Golden State Water Company currently offers a \$175 rebate per residential HET.

http://www.gswater.com/csa_homepages/documents/AC_het_applicationRev6-11.pdf

City of Santa Barbara offers a \$100 rebate per residential HET as they are participants of the CUWCC Smart Rebates, Save Water program listed above.

http://www.santabarbaraca.gov/Resident/Water/Water_Conservation/WCRebates.htm

California Urban Water Conservation Council (CUWCC) rebate value for HETs is \$100 as of October 2012.

<http://www.cuwcc.org/smartrebates-res-fixtures.aspx>

1B: Residential Clothes Washer Rebate

Action Item

Implement a program to convert older, inefficient clothes washers to high efficiency clothes washers.

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient clothes washers with new, higher efficiency models as the clothes washers need to be replaced. The goal is to reduce water usage from clothes washers by replacing them with washers that have a rating by the Consortium of Energy Efficiency (CEE) of Tier 3 (currently at Water Factor of 4.0 or less). Water factor is measured by the quantity of water (gallons) used to wash each cubic foot of laundry. A lower water factor represents greater water and energy efficiency.

Fixtures to be Replaced

This measure is not a condition for connection to the Project.

All clothes washers that are to be replaced with a new clothes washer with a Water Factor of 4.0 or less are eligible for a rebate.

Detailed Measure Description

Measure 1B provides customers with an incentive to purchase a high efficiency clothes washer in lieu of a low efficiency clothes washer to further help reduce indoor water consumption. The following steps will be required to be completed to obtain the rebate:

- Customer may:
 - Obtain the list of the approved clothes washers from the following web page: <http://www.cee1.org/resid/seha/rwsh/rwsh-prod.pdf>
 - Order the clothes washer and install the clothes washer
 - Contact the County to confirm eligibility for the rebate
- The customers will contact the County to arrange for a verification inspection once the new clothes washer is installed.
- The County inspector will verify the receipt and installation of the newly purchased clothes washer.
- Following the home inspection, the County inspector will submit the inspection documentation and enter it into the County database. Once this is recorded, the County will issue the customer the set rebate.

Category		
<input checked="" type="checkbox"/>	Residential	
<input type="checkbox"/>	Commercial & Institutional	
<input type="checkbox"/>	Educational & Outreach	
<input type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
Rebate		
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No
If Yes, Describe: <u>\$150 per clothes washer installation</u>		
Schedule: Year 2012 to 2017 (5 years)		
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1 <input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input checked="" type="checkbox"/> Year 4 <input checked="" type="checkbox"/> Year 5

Rebates

Measure 1B will have one set rebate in the amount of \$150 for all eligible clothes washers. If the property owner installed water saver fixtures before the program begins and are not eligible for Measure 1A rebates, then this clothes washer rebate can be used in addition with the rebate for Measure 1C.

Measure Implementation Costs

There are two costs to Measure 1B: Rebate costs and Administrative costs.

Rebates: It is estimated that approximately 400 washers per year will be replaced at \$150 per clothes washer. Total Inspection, Rebate Processing, and Marketing and Administration Costs are \$57,750; and total costs toward equipment is \$327,250. Therefore, with contingences, the average annual cost for 5 years for Measure 1B is approximately \$77,000.

Table 1B-1.

	Program Length	YEAR 1-5 Per Unit Equipment & Installation Cost	Inspection, Rebate Processing, Marketing and Admin Cost	Program Start Up Budget	Total Estimated Activities	Estimated Budget	Contingency	Total Inspection, Rebate Processing, Marketing and Admin Cost	Total Equipment Cost	Total Budget w Contingency	Average Annual Budget
Single-Family Residential Washer	5 years	\$150	15%	\$5,000	2000	\$350,000	10%	\$57,750	\$327,250	\$385,000	\$77,000

Approved Manufacturers

The Consortium for Energy Efficiency (CEE) high-efficiency clothes washer specifies two components when evaluating efficiency of clothes washers: Energy Consumption (Modified Energy Factor) and Water Usage (Water Factor). Since energy is not a critical element for the purposes of this measure, this measure will focus only on the Water Factor, which provides a direct correlation to the consumption of indoor water usage. The CEE has varying levels for clothes washers. To qualify for a rebate for Measure 1B, only CEE Tier 3 with a Water Factor of 4.0 or less will be approved. See Table 1B-2 for the varying water factor classifications.



For more information on clothes washers: <http://www.cee1.org/resid/seha/rwsh/rwsh-main.php3>

The referenced document provides a list of all clothes washers that meet the requirements to qualify for a rebate for Measure 1B. <http://www.cee1.org/resid/seha/rwsh/rwsh-prod.pdf> The list of qualifying models is updated monthly by the Consortium for Energy Efficiency.

Level	Modified Energy Factor (MEF) ²	Water Factor (WF) ³
Federal Standard	1.26	9.5
ENERGY STAR	2.00	6.0
CEE Tier 1	2.00	6.0
CEE Tier 2	2.20	4.5
CEE Tier 3	2.40	4.0

¹ Table source: Consortium for Energy Efficiency (CEE) © 2011 Consortium for Energy Efficiency, Inc. All rights reserved.

² MEF=Modified Energy Factor, a combination of Energy Factor and Remaining Moisture Content. MEF measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

³ WF=Water Factor (number of gallons needed for each cubic foot of laundry). A lower number indicates lower consumption and more efficient use of water.

Activities to be Conducted by the County of San Luis Obispo

The County will prepare a form to be filled out by the customers to receive the rebate. The County will perform the inspection to verify installation of the approved appliance. County to fully fund the rebate program for properties within the Wastewater Service Area.

Activities to be Conducted by Water Purveyors and Property Owners

Water Purveyors may provide a similar program to properties outside the Wastewater Service Area, but within the Water Purveyor’s service boundary.

Customers are to fill out rebate request and schedule inspection. Customers will be responsible for any additional costs above the set rebate amount and the disposal of the old clothes washer.

Measure Implementation Target, Schedule and Cost

The Rebate program is planned to run for 5 years. Rebate value per machine is \$150. PG&E also offers a clothes washer rebate of \$50. The PG&E criterion for qualification is a CEE Tier 2 machine or higher. This rebate can be combined with the \$150 rebate from the County such that the customer would receive a total rebate of \$200 for their new high efficiency clothes washer machine.

<http://www.pge.com/myhome/saveenergymoney/rebates/appliance/clothes/>

Monitoring, Evaluation and Tracking

Each individual rebate shall have a record of the following:

- Number of washers replaced
- Follow up inspection results from verification
- Tracking water use in the home before and after installation
- Customer satisfaction with the program
- Budget tracking with spreadsheet or database that is kept up on a regular basis

Rebate Value for Surrounding Areas

Some examples of clothes washer rebates being offered in other areas follows.

California Urban Water Conservation Council (CUWCC) rebate value for HEWs is \$150 as of October 2012.

<http://www.cuwcc.org/smartrebates-res-fixtures.aspx>

Cal American (Monterrey) offers a \$50 per residential HECW with a Water Factor of 5.0 or lower.

<http://www.amwater.com/files/CAW%20Rebate%20Application%20%28SAC-Residential%29%207.21.09.pdf>

Golden State Water Company offers a \$125 rebate per residential HECW with a Water Factor of 4.0 or lower.

http://www.gswater.com/csa_homepages/documents/LOSOSOSGoldenStateHECWRebateapplicationcreatedJune2010.pdf

City of Santa Barbara offers a \$150 rebate per residential clothes washer HECW as they are participants of the CUWCC Smart Rebates, Save Water program listed above.

http://www.santabarbaraca.gov/Resident/Water/Water_Conservation/WCRebates.htm

1C: Alternatives for Fully Retrofitted Residences

Action Item

Implement alternative water saver options for additional water savings. This option is only available to residences that already have installed water saver fixtures that meet requirements of Measure 1A, including high efficiency toilets of 1.28 gpf or less. This measure cannot be used in conjunction with Measure 1A.

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by providing alternative options in addition to Measure 1A.

Detailed Measure Description

Measure 1C provides customers with alternative options such as Hot Water On-Demand, High Efficient Dishwashers and High Efficiency Clothes Washers (Measure 1B rebate can be used in conjunction with Measure 1C rebate). The following steps will be required to be completed to obtain the rebate:

- Pre-inspection to verify eligibility and describe planned alternative water saver option
- Owner to purchase and install or contract with licensed plumber
- Post inspection by County staff or licensed plumber installation verification

Rebates

Measure 1C will have a maximum rebate amount up to \$300 for all alternative water saver units. If the property owner installed water saver fixtures before the program begins and are not eligible for Measure 1A rebates, then they will be eligible for the rebate Measure 1C. Rebates may be combined with Measure 1B for up to \$450 for a high efficiency clothes washer.

Measure Implementation Costs

Rebates: It is estimated that approximately 500 water saver units per year will be installed at \$300 per unit. Total Inspection, Rebate Processing, and Marketing and Administration Costs are \$29,929; and total costs toward equipment are \$199,525.

Therefore, with contingences, the average annual cost for 3 years of Measure 1C is approximately \$66,508.

Category			
<input checked="" type="checkbox"/>	Residential		
<input type="checkbox"/>	Commercial & Institutional		
<input type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
Rebate			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
If Yes, Describe: _____			

Schedule			
<input type="checkbox"/>	Year 5-10	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Table 1C-1.

Program Length	YEAR 1-3 Per Unit Equipment & Installation Cost	Inspection, Rebate Processing, Marketing and Admin Cost	Program Start Up Budget	Total Estimated Activities	Estimated Budget	Contingency	Total Inspection, Rebate Processing, Marketing and Admin Cost	Total Equipment Cost	Total Budget w Contingency	Average Annual Budget
3 Years*	\$300	15%	\$1,000	500	\$173,500	15%	\$29,929	\$169,596	\$199,525	\$66,508

Approved Manufacturers

Hot water on-demand and high efficient dishwashers approved by the Energy Star program are eligible for this measure. Measure 1B describes approved manufactures for High Efficiency Clothes Washers.



Activities to be Conducted by the County of San Luis Obispo

County to provide form for certification of compliance consistent with Measure 1A retrofit program. County to perform inspection of water saver units.



Activities to be Conducted by Water Purveyors and Property Owners

Water Purveyors may provide a similar program to properties outside the Wastewater Service Area, but within the Water Purveyor’s service boundary.

Measure Implementation Target, Schedule and Cost

Measure 1A is planned to run from 2012 through 2015, which is approximately one year following the startup of the Project.

Monitoring, Evaluation and Tracking

Each individual rebate shall have a record of the following:

- Number of items and type of item installed (1 hot water on demand) and manufacturer
- Follow up inspection results from verification
- Customer satisfaction with the program

1D: Retrofit on Resale

Action Item

Implement a program to convert older, inefficient toilets and showerheads to higher efficiency models.

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient toilets with new, higher efficiency models. The goal is to replace all toilets flushing more than 1.6 gallons per flush (gpf) and showerheads more than 2.0 gpm.

Detailed Measure Description

Continue existing County program that started in June 2008 to require a certificate of compliance be submitted to the County that verifies a plumber has inspected the property and determined that High Efficiency Toilets flushing lower than 1.6 gpf were in place and showerheads more than 2.0 gpm were installed at the time of sale of any residential property, before close of escrow. Coordinate with new CA law SB 407 but require fixture upgrades rather than notifying new owner of the presence of inefficient fixtures.

Continue to update the ordinance to remain consistent with current technology recommended in Cal Green plumbing code and SB 407 (consider in the future making the ordinance apply for 1.28 gpf toilets). Historical records indicated that the rate of residential home sales varied from 1.0 to 2.2% percent turnover in homes per year with an average of 1.6% of residential homes are sold per year.

Activities to be Conducted by the County of San Luis Obispo

County to consider updating form for certification of compliance to be consistent with Measure 1A retrofit program. County to perform inspection of toilets and showerheads.

Activities to be Conducted by Water Purveyors and Property Owners

None, all areas are covered by the County ordinance.

Schedule for Implementation

On going.

Measure Costs

The only cost for this program is to inspect the homes, and record the data from submitted certificates.

Category		
<input checked="" type="checkbox"/>	Residential	
<input type="checkbox"/>	Commercial & Institutional	
<input type="checkbox"/>	Educational & Outreach	
<input type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
Rebate		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
If Yes, Describe: _____		
Schedule		
<input checked="" type="checkbox"/>	On going	<input type="checkbox"/> Year 1 <input type="checkbox"/> Year 2
<input type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4 <input type="checkbox"/> Year 5

2A: Subsidize Partial Community Retrofit, Commercial

Action Item

Implement a program to replace inefficient toilets, showerheads, and faucet aerators in commercial businesses within the wastewater service area.

Measure Objective and Goals

The objective of this measure is to reduce commercial indoor water use by converting older, inefficient toilets, showerheads, and faucets aerators with new, higher efficiency models. The goal is to replace all toilets flushing more than 1.6 gallons per flush (gpf), showerheads using more than 2.0 gallons per minute (gpm), urinals flushing more than 1.0 gpf and faucet aerators using more than 0.5 gpm with higher efficiency fixtures. Compliance with this measure will be a condition for connection to the Project. This measure is very similar to Measure 1A except instead of residential customers, the program is designed for commercial customers.

Category			
<input type="checkbox"/>	Residential		
<input checked="" type="checkbox"/>	Commercial & Institutional		
<input type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
Rebate			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
If Yes, Describe: _____			

Schedule			
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Fixtures to be Replaced

- All toilets flushing greater than 1.6 gpf are required to be replaced with toilets flushing 1.28 gpf or less. These replacements are eligible for the rebate program. All toilets flushing 1.6 gpf or less are not required to be replaced (see Measure 1A).
- All urinals flushing at greater than 1.0 gpf are required to be replaced with urinals flushing at 0.5 gpf or less. These replacements are eligible for the rebate program. All urinals flushing 1.0 gpf or less are not required to be replaced and are therefore NOT eligible for the rebate program.
- All showerheads flowing greater than 2.0 gpm are required to be replaced with showerheads flowing 1.5 gpm or less. These replacements are eligible for the rebate program. All showerheads flowing 2.0 gpm or less are not required to be replaced and are therefore NOT eligible for the rebate program.
- All faucet aerators flowing greater than 0.5 gpm are required to be replaced with faucet aerators flowing 0.5 gpm or less. These replacements are eligible for the rebate program.

Detailed Measure Description

Due to the impact this measure will have on all customers within the Wastewater Service Area, flexible implementation of this measure is recommended to meet the varying needs. The customer has the following two options:

Option 1: Customer Purchase

Option 1: Customer Purchase provides the customer with full control of the purchase and installation of approved fixtures and provides a rebate (up to a maximum amount with receipt verification) for the cost of the approved fixtures and/or installation costs. To participate in Option 1: Customer Purchase, the customer would complete the following steps:

1. Initial Inspection and Water Survey – Customer will contact the County and schedule a water survey to verify the number and types of fixtures to be replaced, to identify potential water waste concerns, and provide recommendations for additional water savings. If the property owner uses a licensed plumber for installation, the plumber’s installation report can take the place of this survey.
2. Fixture Purchase – If the customer is required to replace any fixtures, the customer or hired plumbing contractor will purchase the fixtures (toilet(s), showerhead(s), and faucet aerator(s)) from the approved list of qualifying fixture models. This list will be provided to the customer at the time of the Initial Inspection. If the customer’s requested fixture model is not on the approved list, customer must receive approval from the County prior to purchase to ensure the fixture meets the standards and will be eligible for the approved rebate.
3. Fixture Installation – Customer will install the approved fixtures (toilet(s), showerhead(s), and faucet aerator(s)). It is the customer’s option to use a plumbing contractor for the installations or to install the fixtures themselves. Customer, or hired plumbing contractor, will be responsible for disposal of replaced toilets (see Section 2.4 for recommendations for a Toilet Recycling Program).
4. Verification Inspection – Once the fixtures are installed, the customer will contact the County for a verification inspection. The customer will provide the County inspector with appropriate receipts for fixture purchases and/or installation costs. The inspector will provide the customer with an inspection report and will complete their rebate documentation. If the customer uses a licensed plumber for installation, the plumber may complete a certification as verification. The County reserves the right to perform a verification inspection.
5. Rebate Issuance – The County will issue a rebate check following the completion and concurrence of the verification inspection report. See Rebate Value section, below, for details on the approved rebates for Option 1.

Option 2: Bulk Fixture Purchase

Option 2: Bulk Purchase provides the customer with approved fixtures at no cost to the customer. The benefits of the County pre-purchasing a bulk number of fixtures is to obtain a lower retail cost for higher-end fixtures and to ensure the customer is receiving an approved fixture that meets the measure’s goals without the customer having the burden of shopping for the fixtures.

Prior to completing the bulk purchase of toilet fixtures, the County may purchase several different makes and models of toilets as test units. The test units would be used to retrofit restrooms in public buildings or businesses that are accessible to the general public. Public outreach for the conservation program would include information about where the test models are located and encourage customers to visit

them. An informal survey or rating of the test models would help determine which model of toilet to select for the bulk purchase.

To participate in Option 2: Bulk Fixture Purchase, the customer would complete the following steps:

1. Initial Inspection and Water Survey – Customer will contact the County and schedule a water survey to verify the number and types of fixtures to be replaced, to identify potential water waste concerns, and provide recommendations for additional water savings. If the property owner uses a licensed plumber for installation, the plumber’s installation report can take the place of this survey.
2. Fixture Pick Up – If the customer is required to replace any fixtures, the customer or hired plumbing contractor will pick up the free fixtures (toilet(s), showerhead(s), and faucet aerator(s)) from a location in Los Osos established by the County.
3. Fixture Installation – Customer will install the approved fixtures (toilet(s), showerhead(s), and faucet aerator(s)). It is the customer’s option to use a plumbing contractor for the installations or to install the fixtures themselves. Customer, or hired plumbing contractor, will be responsible for disposal of replaced toilets (see Section 2.4 for recommendations for a Toilet Recycling Program).
4. Verification Inspection – Once the fixtures are installed, the customer will contact the County for a verification inspection. The customer will provide the County inspector with appropriate receipts for installation costs. The inspector will provide the customer with an inspection report and will complete their rebate documentation. If the customer uses a licensed plumber for installation, the plumber may complete a certification as verification. The County reserves the right to perform a verification inspection.
5. Rebate Issuance – The County will issue a rebate check following the completion and concurrence of the verification inspection report. See Rebate Value section, below, for details on the approved rebates for Option 2.

Rebate Values

All customers within the Wastewater Service Area will be required to replace all inefficient toilets, urinals, showerheads, and faucet aerators prior to connection to the Project. The rebate program is framed to provide customers with a greater incentive to replace their fixtures early. The rebate program for each option is provided in Table 2A-1:

Table 2A-1. Measure 2A Rebates				
			Year 1	Year 2 and 3
Option 1: Customer Purchase	Toilet	Rebate	\$250	\$160
	Showerhead	Rebate	\$40	\$30
	Urinals	Rebate	\$500	\$250
	Faucet Aerator	Rebate	\$5	\$5
Option 2: Bulk Fixture Purchase	Toilet	Rebate	\$110	\$0
	Showerhead	Rebate	\$10	\$0
	Urinals	Rebate	\$400	\$200
	Faucet Aerator	Rebate	\$0	\$0
Rebate amounts are the maximum rebate, per fixture, for actual property owner (customer) expenses for the purchase price and installation costs of each fixture. Installation costs are only eligible for rebates when installed and invoiced by a licensed contractor.				

NOTE: For cost purposes, it is assumed an average of \$1,000 per commercial site for rebates. This would equate to an average of two toilets and 1 urinal rebate per site. This may be more or less rebates needed per site depending on the field inspection. No maximum rebate is set per site as the goal is to replace as many indoor fixtures as possible for the budget available for this measure.

Measure Implementation Costs

To budget for Measure 2A, the following assumptions have been made:

- Number of commercial businesses to be upgraded – 141 (schools and churches covered by measure 2C)
- Number of toilets per CII site – 3
- Number of toilets that are higher than 1.6 gpf (60%, conservative estimate)
- Number of urinals per site - 1
- Number of showerheads - very few
- Number of showerheads per business– 0 (there may be some in fitness centers, etc.)
- Number of aerator faucets – 3
- Cost to administer the program - \$28,833

Based on these assumptions, the cost per business for each option is provided in Table 2A-2.

			# of Units	Year 1		Years 2 and 3	
				Cost per Unit	Cost per Business	Cost per Unit	Cost per Business
Option 1: Customer Purchase	Toilets	Rebate	2	\$250	\$500	\$160	\$320
	Urinals	Rebate	1	\$500	\$500	\$250	\$250
	Aerated Faucets	Rebate	3	\$5	\$15	\$5	\$15
	Administrative Costs	County Cost	1	n/a	\$150	n/a	\$150
	Option 1 Estimated Total Cost Per Business				\$1,165		\$735
Option 2: Bulk Fixture Purchase	Toilets	Rebate	2	\$110	\$220	\$0	\$0
		County Cost		\$130	\$260	\$130	\$260
	Urinals	Rebate	1	\$400	\$400	\$200	\$200
		County Cost		\$100	\$100	\$50	\$50
	Aerated Faucets	Rebate	3	\$0	\$0	\$0	\$0
		County Cost		\$2	\$6	\$2	\$6
	Administrative Costs	County Cost	1	n/a	\$150	n/a	\$150
	Option 2 Estimated Total Cost Per Business				\$1,136		\$666

Note – For Measure 2A budgeting purposes, it was assumed that all participants will utilize Option 1.

Approved Manufacturers

Only approved fixture make and models will be eligible to qualify for the rebates identified above. These approved fixtures meet the goals of this measure.



Toilets: Recent advancements have allowed commercial toilets to use 20 percent less water than the current federal standard (1.6 gpf), while still providing equal or superior performance. The [WaterSense label](#) is used on toilets that are certified by independent laboratory testing to meet rigorous criteria for both performance and efficiency. Only toilets that complete the third-party certification process can earn the WaterSense label. All toilets certified by WaterSense are 1.28 gpf or less. Information about WaterSense labeled toilets:

<http://epa.gov/watersense/products/toilets.html>

The toilets that are eligible for Measure 3A rebates are provided in the commercial WaterSense toilet list, located here: http://epa.gov/watersense/product_search.html?Category=2

Toilet performance test data is available via MaP test results: <http://www.map-testing.com/about/maximum-performance/map-search.html#types>

which has over 200 commercial flush valve 1.28 gpf toilets.

Urinals: Conventional urinals use 3 to 5 gallons of water per flush (gpf). Nearly 65 percent of the urinals in use today—approximately 7.8 million fixtures—exceed the maximum allowable flush volume set by federal standards. While the current federal standard for commercial urinals is 0.5 gallon per flush (gpf), some older urinals use as much as ten times that amount! Urinals that earn the [WaterSense label](#) must demonstrate that they use no more than 0.5 gpf.

Showerheads: Conventional showerheads use 2.5 gallons of water per minute (gpm). Showerheads that earn the [WaterSense label](#) must demonstrate that they use no more than 2.0 gpm. The WaterSense label also ensures that these products provide a satisfactory shower that is equal to or better than conventional showerheads on the market. Information about WaterSense labeled showerheads:

<http://epa.gov/watersense/products/showerheads.html>

The showerheads that are eligible for Measure 2A rebates are provided in the WaterSense showerhead list, located here: http://epa.gov/watersense/product_search.html?Category=4

Faucets and Faucet Aerators: WaterSense labeled bathroom sink faucets and accessories (aerators) can reduce a sink's water flow by 30 percent or more without sacrificing performance. Information about WaterSense labeled faucet aerators. http://epa.gov/watersense/products/bathroom_sink_faucets.html

The faucet aerators that are eligible for Measure 2A rebates are provided in the WaterSense faucet aerator list, located here: http://epa.gov/watersense/product_search.html?Category=1

Activities to be Conducted by the County of San Luis Obispo

The administration of Measure 2A will require thorough planning and detailed data tracking to ensure the successfulness of the implementation. The following actions will be completed by the County:

- Set up a recycling program for the replaced toilets and fixtures
- Train County inspectors on process, eligible fixtures to be replaced, rebate process, etc.
- Create a database to collect all relevant data (see Section 4, Monitoring, Evaluation, and Tracking for items to be included in the database).
- Prepare an inspection/rebate form to be filled out by the customers/plumbing contractors and inspectors to receive the rebates and be in compliance for the Project. The County may perform an inspection to verify eligible fixtures and proper installation of approved fixtures.
- Select sample toilets and a packaged showerhead and aerator kits for “bulk” purchase and have the sample fixtures installed free of charge in various locations for “testing”. County may work with Water Purveyors to offer a water credit to the businesses being used for testing.
- *Optional Activity: Fixture Exchange Day.* The County would specify a day that customers could come and pick up new fixtures in exchange for their inefficient fixtures.

- *Optional Activity: Plumber Initiated Program.* County would prepare an RFQ to and conduct a pre-qualification meeting for plumbing contractors. County to review pre-qualification packages and create a list of qualified plumbing contractors to participate in the Plumbers Initiated Program. The County will set up a “training” date for the approved contractors. The County would publish the pre-qualified list of plumbing contractors on the County’s website.

Activities to be Conducted by Water Purveyors and Property Owners

Water Purveyors may provide similar program to properties outside the Wastewater Service Area, but within the Water Purveyor’s service boundary. The Water Purveyors may be requested to offer a water credit to businesses that are used for testing bulk purchased fixtures.

Property owners to select a program option and follow steps outlined above. Property owners will be responsible for paying for any additional costs not covered by the rebates.

Measure Implementation Target, Schedule and Cost

Measure 2A target is to replace all inefficient toilets, showerheads, urinals, and faucet aerators with higher efficiency models to reduce indoor water consumption by an estimated 20 to 30 percent. It is estimated that approximately 141 businesses will be surveyed and fixtures replaced as a result of this measure.

Measure 2A is planned to run 3 years. Customers will be encouraged with financial incentives to complete the retrofits of the fixtures within the first year of the program.

The total program budget for Measure 2A is \$163,389 for equipment and approximately \$28,833 for administration cost. The table below shows the average annual cost of the program at \$64,074.

Table 2A-3.

Program Length	YEAR 1-3 Per Unit Equipment & Installation Cost	Inspection, Rebate Processing, Marketing and Admin Cost	Program Start Up Budget	Total Estimated Activities	Estimated Budget	Contingency	Total Inspection, Rebate Processing, Marketing and Admin Cost	Total Equipment Cost	Total Budget with Contingency	Average Annual Budget
3 years	\$1,000	15%	\$5,000	141	\$167,150	15%	\$28,833	\$163,389	\$192,223	\$64,074

Measure Monitoring, Evaluation and Tracking

A database will be established to record the following at each individual commercial property:

- Number and flush volume of toilet (greater than 1.6 gpf, 1.6 gpf, 1.28 gpf or 0.8 gpf)
- Number and flow rate of shower head(s) intalled (2.0 gpm or 1.5 gpm)
- Number and flow rate of faucet aerators installed (0.5 gpm)
- Number and flow volume of urinal (greater than 1.0 gpf, 1.0 gpf, 0.7 gpf, 0.5 gpf or waterless)
- Number of contacts (attempts) to reach customer
- Which replacement option did the business owner select (Option 1 or 2)
- Which plumber did the installation (in case there are customer call backs about issues)
- Follow up inspection results from verification
- Tracking water use in the home before and after installation
- Customer satisfaction with the program
- Budget tracking with spreadsheet or database that is kept up on a regular basis

County to set up a database to track the above information and periodically issue progress reports so that program can be evaluated quarterly or semi-annually and adjusted as needed to meet goals and schedule.

2B: Replace Pre-Rinse Spray Nozzles

Action Item

Implement a program to convert older, inefficient pre-rinse spray nozzles in restaurants and other commercial businesses (typically food establishments, grocery stores) to lower flow pre-rinse spray nozzles.

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient pre-rinse spray nozzles with new pre-rinse spray nozzles that use 1.15 gallons per minute (gpm) or lower for the rinse and clean operation in restaurants and other commercial kitchens. The goal is to replace all pre-rinse spray nozzles prior to connection to the Project.

Fixtures to be Replaced

- All pre-rinse spray rinse nozzles that use more than 1.15 gpm. Nozzles that use less than 1.15 gpm would not qualify for this program unless deemed nonfunctional or impaired during field inspection.

Category			
<input type="checkbox"/>	Residential		
<input checked="" type="checkbox"/>	Commercial & Institutional		
<input type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
Rebate			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
If Yes, Describe: <u>Nozzles are to be provided free to business owners</u>			
Schedule			
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Detailed Measure Description

Measure 2B provides business customers free low flow pre-rinse spray nozzles. The following steps will be required to be completed to obtain the nozzles:

- County will select a pre-rinse spray nozzle for bulk purchase.
- During the business inspection for measure 2A, the County will look for and determine if the business has any pre-rinse spray nozzles that flow at more than 1.15 gpm.
- If there are high volume pre-rinse spray nozzles, business will be provided with new nozzles free of charge. If possible the nozzle will be installed during the initial inspection. Alternatively if there are other older fixtures found at the business, then the pre-rinse spray nozzle may be replaced at the time of installation of the toilets, urinals, showerheads or faucets.
- The County inspector will verify the receipt and installation of the newly purchased pre-rinse spray nozzle.
- Following the business final inspection, the County inspector will submit the inspection documentation and enter it into the County database.

Rebates

Not applicable, the nozzles will be provided by the County directly to the businesses at no charge.

Measure Implementation Costs

There are two costs to Measure 2B: Equipment costs and Administrative costs.

Equipment Costs: The money required by the County to pre-order the nozzles.

Administrative Costs: Measure 2B will require administration time to select a nozzle and pre-order in bulk, conduct inspections, track the progress, and issue verification of replacement certificated. It is estimated this program set up will cost approximately \$1,000. The \$1,000 Start up costs for this measure is to buy a few valves to test, then select exact valve and buy 25-50 valves as needed.

Approved Manufacturers

Currently there are an estimated 1.35 million commercial pre-rinse spray valves in use in the United States. Up to 50 percent (675,000) of these pre-rinse spray valves may be inefficient units, with flow rates exceeding the current 1.6 gallon per minute (gpm) maximum flow rate allowed by federal standards (the Energy Policy Act of 2005 [EPAct 2005]) by between 1.0 and 3.0 gpm. Since Congress enacted the federal standard, manufacturers have developed even more efficient pre-rinse spray valves that use significantly less water than the standard 1.6 gpm models. Based on current advertised product flow rates, these new valves can use between 0.35 and 1.1 gpm less than standard models, resulting in savings of 6,400 to 20,000 gallons per pre-rinse spray valve per year. Since pre-rinse spray valves use hot water, reducing the flow rate and total gallons of hot water used also leads to significant energy savings of about 1,100 to 3,500 kilowatt hours (kWh) of electricity per year or 5,600 to 17,500 cubic feet (5.6 to 17.5 Mcf) of natural gas per year¹. Replacing older, inefficient pre-rinse spray valves with these new models can save even more water and energy.

The Food Services and Technology Center (FSTC) has tested pre-rinse spray valves and determined that a low-flow pre-rinse spray valve is one of the easiest and most cost effective energy saving devices available to the foodservice operator.

In addition to minimizing water consumption, water heating energy and sewer charges are also reduced. Replacing a typical pre-rinse spray valve that flows up to three gallons of water per minute (gpm) with a low-flow unit can yield the following results: The savings would be even higher than shown in this table if 1.15 gpm valves are used rather than 1.6 gpm valves.

Hours of Spray Valve Usage	Water Savings gallons/day	Waste Water Savings gallons/day	Gas Savings therms/day	Annual Dollar Savings
1 hour/day	60 gallons	60 gallons	0.5 therms	\$300 - \$350
2 hours/day	120 gallons	120 gallons	1.0 therms	\$600 - \$700
3 hours/day	180 gallons	180 gallons	1.5 therms	\$900 - \$1050

Table shows results based on spray valve water savings of 1 gallon per minute, water cost of \$2.00 per unit (748 gallons), sewer cost of 3.00 per unit (748 gallons), and gas cost of \$1.00 per therm.

The FSTC recommends a pre-rinse spray valve with a flow rate of 1.6 gallons per minute or less, and with a cleanability performance of 26 seconds per plate or less, based on the ASTM *Standard Test Method for Performance of Pre-Rinse Spray Valves*.

The following pre-rinse spray valves have been verified by the FSTC to meet this criteria:

- [BK Resources PRV-1](#)
- [Bricor B064 PRV](#)
- [Bricor B074 PRV](#)
- [Bricor B084 PRV](#)
- [Bricor B094 PRV](#)
- [Bricor B095NS](#)
- [Chicago Faucet 90-LABCP](#)
- [Encore KN50-Y002-12](#)
- [Fisher Ultra-Spray 2949 & 71307](#)
- [Krowne Metal Water Saver 21-129](#)
- [Niagara N2180](#)
- [Strahman Kwik-Clean 3](#)
- [Strahman Kwik-Clean 3 \(Fan Position\)](#)
- [Strahman Kwik-Clean 3 \(Tri Tip Position\)](#)
- [Strahman Kwik-Clean II](#)
- [T&S B-0107](#)
- [T&S EB-0107-C](#)
- [T&S B-0107-C](#)
- [T&S Equip 5SV](#)
- [T&S Equip 5SV-C](#)
- [T&S JetSpray B-0108](#)
- [T&S JetSpray B-0108-C](#)
- [T&S B-2108](#)
- [Zurn Z80000-PR1](#)

The Federal Government has issued guidelines for its facilities when purchasing pre-rinse spray valves.

These guidelines, published by the Federal Energy Management Program (FEMP) can be followed by any facility interested in energy efficiency and conservation.

Source: <http://www.fishnick.com/equipment/sprayvalves/>

For more information on pre-rinse spray valves see:

http://www.energystar.gov/ia/partners/prod_development/new_specs/downloads/pre_rinse_spray_valves/PRSV_Notice_of_Intent.pdf

<http://epa.gov/watersense/products/prsv.html>

Activities to be Conducted by the County of San Luis Obispo

The County will preorder the valves and provide them to the inspectors involved in the subsidized commercial retrofit program (Measure 2A). The County will perform the inspection to verify installation of approved valves. County to fully fund the replacement program for properties within the Wastewater Service Area. County will coordinate recycle old valves if applicable.

Activities to be Conducted by Water Purveyors and Property Owners

Water Purveyors may provide similar program to properties outside the Wastewater Service Area, but within the Water Purveyor's service boundary.

Customers are to approve the installation of the new valves.

Measure Implementation Target, Schedule and Cost

The Rebate program is planned to run for 3 years from 2012 to 2015. Approximate cost per valve is \$50, Total costs including administration and a contingency is about \$3,650. It is assumed that there is one pre-rinse spray valve per food establishment, grocery store as well as a few of the general business customers. Pre-rinse spray valves can be found in pet care to wash the animals, ice cream stores and coffee shops to wash containers, grocery stores to clean up after meat processing and more. The approximate number of businesses with pre-rinse spray nozzles located in the Wastewater Service Area is 45:

- 27 Food establishments
- 4 Grocery Store
- 4 Hotels
- 105 Other Business
- 14 Schools / Churches
- 154 Total Commercial & Institutional Establishments

Based on this data it is recommended the County buy 25 or 50 valves in "bulk". Additional valves can be purchased as needed.

Monitoring, Evaluation and Tracking

Each individual business shall have a record of the following:

- Number of pre-rinse spray valves in establishment
- Number of pre-rinse spray valves replaced , pre-rinse spravy valve flow rate (1.6 gpm or lower, 1.15 gpm recommended),
- Follow up inspection results from verification
- Tracking water use in the business before and after installation
- Customer satisfaction with the program
- Budget tracking with spreadsheet or database that is kept up on a regular basis

2C: Institutional (School and Church) Building Retrofit

Action Item

Implement a program to replace inefficient toilets, showerheads, and faucets in institutional buildings (schools and churches).

Measure Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient toilets, showerheads, and faucets with new, higher efficiency models. The goal is to eliminate all toilets flushing more than 1.6 gallons per flush, showerheads using more than 2.0 gpm, and faucets using more than 1.5 gpm. This measure will be a condition for connection to the Project.

Fixtures to be Replaced

- All toilets flushing greater than 1.6 gpf are required to be replaced with toilets flushing 1.28 gpf or less. These replacements are eligible for the rebate program. All toilets flushing 1.6 gpf or less are not required to be replaced (see Measure 1A).
- All urinals flushing at greater than 1.0 gpf are required to be replaced with urinals flushing at 0.5 gpf or less. These replacements are eligible for the rebate program. All urinals flushing 1.0 gpf or less are not required to be replaced and are therefore NOT eligible for the rebate program.
- All showerheads flowing greater than 2.0 gpm are required to be replaced with showerheads flowing 1.5 gpm or less. These replacements are eligible for the rebate program. All showerheads flowing 2.0 gpm or less are not required to be replaced and are therefore NOT eligible for the rebate program.
- All faucet aerators flowing greater than 0.5 gpm are required to be replaced with faucet aerators flowing 0.5 gpm or less. These replacements are eligible for the rebate program.

Description of Measure

County to run a program patterned after MWD of Southern California's school retrofit program wherein school receives a grant to replace inefficient fixtures. The City of Corona also runs a Water Use Efficiency Grant Program to fund school water efficient projects:

<http://www.discovercorona.com/City-Departments/Department-of-Water---Power/Conservation-Main/Water-Use-Efficiency-Grant.aspx>

Rebate

School is to receive cash grant for the replacement of inefficient toilets, showerheads, and faucets meeting minimum requirements, after the County has verified the installation.

Category			
<input type="checkbox"/>	Residential		
<input checked="" type="checkbox"/>	Commercial & Institutional		
<input type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
Rebate			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
If Yes, Describe: _____			

Schedule			
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Approved Manufacturers

Same manufacturers would qualify as shown in Measure 2A.

Activities to be Conducted by the County of San Luis Obispo

The County will prepare a form to be filled out by the customers to receive the grant. The County will perform the inspection to verify installation of approved appliance. County to fully fund rebate program for institutional properties within the Wastewater Service Area.

Activities to be Conducted by Water Purveyors and School Districts

Water Purveyors may provide similar program to properties outside the Wastewater Service Area, but within the Water Purveyor's service boundary. Property owners are to fill out grant request and schedule inspection.

Measure Implementation Target, Schedule and Cost

The measure plans to run from 2012 to 2015 or 3 years. Cost will depend on the number of inefficient fixtures remaining to be replaced at each school. It is unknown at this time if any schools have been upgraded to efficient fixtures. Assume not all schools and churches will need a retrofit as may be new or already retrofitted at a cost of \$2,500 per site. Total measure cost with contingency is estimated to be \$38,588.

Schools/Churches

1. Monarch Grove Elementary School
2. Baywood Elementary School
3. Sunnyside Elementary School
4. Bay Osos Montessori
5. Los Osos Christian Fellowship
6. Baywood Community Park Church
7. Ocean Pacific Church
8. South Bay Christian Fellowship
9. Trinity Methodist Church
10. Village Children's Center
11. Sunnyside Head Start

2D: Commercial High Efficiency Clothes Washer Rebate

Action Item

Implement a program to convert older, clothes washers to high efficiency clothes washers.

Objective and Goals

The objective of this measure is to reduce indoor water use by converting older, inefficient clothes washers with new, higher efficiency models as the clothes washers need to be replaced. The goal is to reduce water usage from clothes washers to a rating by Consortium for Energy Efficiency (CEE) of Tier 3 (currently Water Factor (WF) of 4.5 or less).

Description of Measure

County shall contact businesses such as hotels, fitness centers, and commercial laundry facilities in the Wastewater Service Area and offer a rebate to replace outdated clothes washing machines that have a WF higher than 4.5.

Category		
<input type="checkbox"/>	Residential	
<input checked="" type="checkbox"/>	Commercial & Institutional	
<input type="checkbox"/>	Educational & Outreach	
<input type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
Rebate		
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No
If Yes, Describe: _____		
Schedule		
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1 <input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4 <input type="checkbox"/> Year 5

Rebate

Customer is to receive a cash rebate for each new clothes washer meeting minimum requirements, after the County has verified the installation of the new clothes washer. Leased clothes washers are eligible for rebates if it is established that the machines are to remain inside the wastewater service area boundary.

Approved Manufacturers

Consortium for Energy Efficiency Website has a current updated list of manufacturers for Tier 3 Machines. <http://www.cee1.org/resrc/facts/cwsh-fx.pdf>

Table 1B-1. CEE Commercial Washer Classifications¹

Level	Modified Energy Factor (MEF) ²	Water Factor (WF) ³
ENERGY STAR	1.80	7.5
CEE Tier 1	1.80	7.5
CEE Tier 2	2.00	6.0
CEE Tier 3	2.20	4.5

¹ Table source: Consortium for Energy Efficiency (CEE) © 2011 Consortium for Energy Efficiency, Inc. All rights reserved.

² MEF=Modified Energy Factor, a combination of Energy Factor and Remaining Moisture Content. MEF measures energy consumption of the total laundry cycle (washing and drying). It indicates how many cubic feet of laundry can be washed and dried with one kWh of electricity; the higher the number, the greater the efficiency.

³ WF=Water Factor (number of gallons needed for each cubic foot of laundry). A lower number indicates lower consumption and more efficient use of water.

Activities to be Conducted by the County of San Luis Obispo

County to prepare a rebate application form for clothes washers.

County is to perform an inspection of the installed clothes washers. County is to fully fund rebate program for commercial laundry facilities within the Wastewater Service Area. It is assumed that there are only a few facilities that would qualify for the program including the San Luis Coin Op Laundry Machines.

Activities to be Conducted by Water Purveyors and Customers

Water Purveyors may provide similar program to properties outside the Wastewater Service Area, but within the Water Purveyor's service boundary.

Measure Implementation Target, Schedule and Cost

The measure plans to run from 2012 to 2015 or 3 years.

The rebate will be \$300 per commercial machine. Since there are very few businesses in the wastewater service area with commercial machines, it is recommended the County contact the individual businesses and tailor the program such that they are able and willing to participate. County will determine what program will motivate the customer to change their machines to a more efficient model.

3A: Residential Water Surveys

Action Item

Conduct water surveys for residential single family customers.

Objective and Goals

The objective is to make customers aware of water saving measures that could be implemented in their homes. The goal is to visit each residential home by the end of year 3. Ideally the surveys can be completed at the time of initial inspection for other residential measures (Measure 1A and 1B).

Description of Measure

A water survey would be conducted as a free service to residential customers to identify strategies on how to reduce water use at the customer’s home. The survey would evaluate water using appliances for water leaks, conduct a questionnaire on typical water usage, and provide informational packets on common ways to reduce water usage.

Category			
<input type="checkbox"/>	Residential		
<input type="checkbox"/>	Commercial & Institutional		
<input checked="" type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
Rebate			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
If Yes, Describe: _____			
Schedule			
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Activities to be Conducted by the County of San Luis Obispo

The County would send out informational flyers and post information on their website about the free services from the County. The County would develop the water survey and would conduct the water survey. We recommend for the 5,000 homes be surveyed in coordination with Measure 1A and 1B initial and final inspections. County administrative and technical staff would be responsible for scheduling and completing surveys. A team of two water surveyors, each working independently, should be able to complete up to 50 water usage surveys per week and complete the goal of conducting water surveys for all residential units with the three years of the program. Survey staff will provide customers with a report of the water survey findings and recommendations for reducing water consumption. While the water surveys are most effective when a trained surveyor can evaluate all of the fixtures and appliances in a home, it is not necessary to enter a home if the resident objects. Water surveys can be completed from outside the home by conducting a short interview with a resident and completing a questionnaire to estimate water usage patterns.

Activities to be Conducted by Others

Water Purveyors may provide similar program to properties outside the Wastewater Service Area, but within the Water Purveyor’s service boundary.

Measure Implementation Target, Schedule and Cost

The measure plans to run from 2012 to 2015 or 3 years. The total cost for the residential water surveys measure, with contingencies, is planned to be \$824,250.

The unit cost for each resident surveys are based on 1.75 hours of inspector time at \$60 per hour and 1.0 hour of administrative rebate processing at \$50 per hour. Using these unit costs, the total base cost for 5,000 residential water survey is \$785,000. After a 5% contingency is applied, the total cost is estimated at \$824,250.

3B: Commercial, Industrial, and Institutional Surveys

Action Item

Conduct water surveys for commercial, industrial, and institutional customers.

Objective and Goals

The objective is to educate customers and involve the customers on being proactive on establishing ways to reduce individual water use. The goal is to visit all of the businesses by the year 4. Ideally the surveys can be completed at the time of initial inspection for other commercial measures (Measure 2A, 2B, 2C, and 2D).

Description of Measure

A water survey would be conducted as a free service to commercial customers to identify strategies on how to reduce water use at the customer’s home. The survey would evaluate water using appliances, conduct a questionnaire on typical water usage, and provide informational packets on common ways to reduce water usage.

Category			
<input type="checkbox"/>	Residential		
<input type="checkbox"/>	Commercial & Institutional		
<input checked="" type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No	
Rebate			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
If Yes, Describe: _____			

Schedule			
<input type="checkbox"/>	On-Going	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4	<input type="checkbox"/> Year 5

Rebate / Approved Manufacturers

Not applicable.

Activities to be Conducted by the County of San Luis Obispo

This program would directly link to all other commercial measures (Measure 2A, 2B, 2C and 2D). The survey would come first and inform the customer which retrofits are needed and what they qualify for in terms of rebates or subsidized replacements. The County would send out informational flyers on the free services from the County. The County would develop the water survey information form to collect all relevant data and would conduct the water survey in the field. This measure would have a similar approach to the residential surveys (Measure 3A) except the commercial customers would get a “courtesy leak survey” and get an inventory of the types and volumes of appliances and fixtures.

Activities to be Conducted by Water Purveyors and Customers

This effort should be done as a joint effort with the Water Purveyors.

Measure Implementation Target, Schedule and Cost

The measure plans to run from 2012 to 2015 or 3 years. The total cost for the CII water surveys measure, with contingencies, is planned to be \$35,102.

3C: Public Information Program

Action Item

Implement a public information program to educate and raise awareness of conservation measures available to customers.

Measure Objective and Goals

The objective is to raise awareness of the need for conservation in the community and conservation measures available to customers.

Description of Measure

This measure would educate the public related to how much conservation is needed and raise awareness of what actions the customer can take through various water conservation techniques, incentive programs available, and new regulations or ordinances. The program will expand on existing efforts and create new methods for educating the public. The programs may include, but not limited to:

Rebate / Approved Manufacturers

Not applicable

Activities to be Conducted by the County of San Luis Obispo

County to research other public information campaigns and select a message and theme for all information and methods for effective outreach.

Activities to be Conducted by Water Purveyors and Customers

Water Purveyors will work with County to create a coordinated message throughout the region.

Measure Implementation Target, Schedule and Cost

The schedule of the measure is planned to be the following:

Year 1

- Conservation website – include information about the programs, rebate forms, etc.
- Printed educational material in water bills – announce the program via bill inserts
- Booths at farmer’s markets – tell the community in person about the program
- Personal contact by County or other staff / contractors – introduce community member to the goals and efforts of the program. Get community excited to participate in the program!

Year 2

- School education programs – get kids excited for the program!

Category		
<input type="checkbox"/>	Residential	
<input type="checkbox"/>	Commercial & Institutional	
<input checked="" type="checkbox"/>	Educational & Outreach	
<input type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
Rebate		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
If Yes, Describe: _____		

Schedule		
<input checked="" type="checkbox"/>	Year 6-10	<input checked="" type="checkbox"/> Year 1 <input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input checked="" type="checkbox"/> Year 4 <input checked="" type="checkbox"/> Year 5

- Poster contests
- Speakers to community groups
- Conservation hotline
- Messaging on water bills

Year 3

- Educational videos
- Radio and television ads – try to get interest from those that have not yet participated. Talk about success of the program to date, and the further goal the community is trying to reach
- Direct mail or phone contact

Years 4 –10

- Conservation website – include information about the programs, rebate forms, etc.
- Printed educational material in water bills – announce the program via bill inserts
- School education programs – get kids excited for the program!
- Radio and television ads – try to get interest from those that have not yet participated. Talk about success of the program to date, and the further goal the community is trying to reach

The average annual cost the measure for the first three years is planned to be \$22,000, and for years 4 to 10 estimated at \$15,000, with a total cost of \$220,500 for program start up and Program Year 1 through Program Year 10.

3D: Media Campaign

Action Item

Implement a media campaign that challenges customers to reduce water use voluntarily.

Objective and Goals

The objective of this measure is to reduce water use by encouraging customers to partake in a challenge of reducing water use. The goal is to provide customers with an incentive to reduce water consumption by installing new efficient equipment. The ultimate goal is for the entire community to get involved with the goal of reducing water use 20% by 2020.

Description of Measure

The County would implement a media campaign that would challenge customers to reduce water use by 20%. The media campaign would utilize Measure 3C: Public Information Program to educate customers of the campaign.

Rebate / Approved Manufacturers

Not applicable

Activities to be Conducted by the County of San Luis Obispo

Develop the campaign challenge and promote the program. Obtain data from the Water Purveyors to determine who met the challenge requirements and provide customers with additional awards or rebates.

Activities to be Conducted by Others

Water Purveyors to provide the County with water usage per account.

Measure Implementation Target, Schedule and Cost

The schedule of the measure is planned to be the following:

Years 1

- Decide on theme for the website and messages
- Design flyers / messages to be distributed
- Hang a banner in the town so that they know and can see the message on a regular basis
- Get community groups to co-sponsor the efforts – Gardening groups, School groups, etc.

Category			
<input type="checkbox"/>	Residential		
<input type="checkbox"/>	Commercial & Institutional		
<input checked="" type="checkbox"/>	Educational & Outreach		
<input type="checkbox"/>	New Development		
Requirement for Connection to Project			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
Rebate			
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No	
If Yes, Describe: _____			

Schedule			
<input checked="" type="checkbox"/>	Year 6-10	<input checked="" type="checkbox"/> Year 1	<input checked="" type="checkbox"/> Year 2
<input checked="" type="checkbox"/>	Year 3	<input checked="" type="checkbox"/> Year 4	<input checked="" type="checkbox"/> Year 5

Year 2

- Continue to update the messages. Keep main theme, but maybe change and refresh individual elements of media campaign. Same logo, but maybe new images.
- Tie them to the public education efforts - Poster contests, etc.
- Assess if media theme is working. Talk to customers to see if they have heard of the program.

Year 3

- Coordinate theme with public education “radio and television ads” – try to get interest from those that have not yet participated. Talk about success of the program to date, and the further goal the community is trying to reach
- Coordinate media campaign theme with public education “Direct mail or phone contact”
- Consider use of social media

Years 4 – 10

- Use all the above methods as necessary to educate and encourage water conservation

The average annual cost the measure for the first three years is planned to be \$27,000, and for years 4 to 10 estimated at \$10,000, with a total cost of \$178,500 for program start up and Program Year 1 through Program Year 10.

4A – 4H: New Development / New Ordinance Regulations Governing Water Service to Customers

Action Item

Require all new development to install efficient equipment as a condition of water service.

Objective and Goals

The objective of these measures is to install high efficiency fixtures and appliances in all new residential and commercial development to encourage low water use. The goal is to mandate all new development to install efficient equipment and appliances that extend beyond the current California Green “Cal Green” Building Code.

Description of Measure

This measure will require that all new development, prior to receiving occupancy permit, verify that efficient fixtures and appliances have been installed. The items to be covered in the ordinance include the following:

Category		
<input type="checkbox"/>	Residential	
<input type="checkbox"/>	Commercial & Institutional	
<input type="checkbox"/>	Educational & Outreach	
<input checked="" type="checkbox"/>	New Development	
Requirement for Connection to Project		
<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/> No
Rebate		
<input type="checkbox"/>	Yes	<input checked="" type="checkbox"/> No
If Yes, Describe: _____		

Schedule		
<input checked="" type="checkbox"/>	On-Going	<input type="checkbox"/> Year 1 <input type="checkbox"/> Year 2
<input type="checkbox"/>	Year 3	<input type="checkbox"/> Year 4 <input type="checkbox"/> Year 5

Item	Efficiency Standard Recommended	Comment
Efficient Dishwashers	TBD by County	Coordinate with County Planning Department.
High Efficiency Clothes Washers	TBD by County	Coordinate with County Planning Department.
Hot Water on Demand/Structured Plumbing	TBD by County	Coordinate with County Planning Department.
Plumbing for Future Grey Water Use	TBD by County	Coordinate with County Planning Department.
New Landscape and Irrigation Requirements	TBD by County	Coordinate with County Planning Department.
Smart Irrigation Controllers and Rain Sensors	TBD by County	Coordinate with County Planning Department.
Multi-Family Submetering on New Accounts	TBD by County	Coordinate with County Planning Department.
Efficient Fixtures in Commercial, Industrial, and Institutional Buildings	TBD by County	Coordinate with County Planning Department.

Rebate / Approved Manufacturers

Not applicable

Activities to be Conducted by the County of San Luis Obispo

The County is to perform an inspection of the fixtures and appliances prior to issuing occupancy permit. The County shall update the ordinance to stay current with the best available technology.

Activities to be Conducted by Water Purveyors and Customers

Not applicable

Measure Implementation Target, Schedule and Cost

The schedule for this measure is on going. The developer would incur the cost to implement water conservation measures for new development in accordance with current building codes and ordinances.

Section 3.0 Schedule, Staffing and Budget

3.1 Schedule

The schedule for each individual measure varies depending upon if requirements for connection to the waste water collection system, complexity of the program, and customers participation rate. An overall combined suggested schedule and annual budget for all of the measures is provided in this section.

3.2 Implementation Suggestions for Conservation Measures Estimated Implementation Schedule and Budget (FY2012-13 to FY2022-23)

Table 3-1 presents a summary of all measures and gives an estimated implementation schedule and budget to guide the County in developing an annual work plan for the water conservation program. The County intends to develop detailed annual work plans, and to monitor progress in attaining demand reductions, along with updates to the implementation schedule on an annual basis. It is recommended the County develop a detailed annual budget as part of its annual work plan development process.

Table 3-1 Measure Schedule and Staffing Budget						
Measure Number	Measure Name	Measure Length	Admin and Staff Cost %	Total Admin and Staff Cost	Measure Equipment/Supplies Cost	Total Budget Years 1-10 with Contingency
Category 1. Residential Programs						
1A	Subsidize Partial Community Retrofit, Residential Toilets	3 years	15%	\$379,608	\$2,151,111	\$2,530,719
1B	Residential Clothes Washer Rebate	5 years	15%	\$57,750	\$327,250	\$385,000
1C	Alternatives for Fully Retrofitted Residences	3 years	15%	\$29,929	\$169,596	\$199,525
Category 2. Commercial and Institutional						
2A	Subsidize Partial Community Retrofit, Commercial	3 years	15%	\$28,833	\$163,389	\$192,223
2B	Replace Restaurant Spray Nozzles	3 years	10%	\$365	\$3,284	\$3,649
2C	Institutional Building Retrofit	3 years	10%	\$3,859	\$34,729	\$38,588
2D	Commercial High Efficiency Clothes Washer Rebate	3 years	5%	\$714	\$13,566	\$14,280
Category 3. Education and Outreach						
3A	Residential Water Surveys	3 years	0%	\$814,250	\$10,000	\$824,250
3B	Commercial, Industrial and Institutional Surveys	3 years	0%	\$35,102	\$0	\$35,102
3C	Public Information Program	10 years	10%	\$22,050	\$198,450	\$220,500
3D	Media Campaign	10 years	10%	\$17,850	\$160,650	\$178,500
Contingency for Additional Measures in Years 4-10						\$327,600
Plan Development Costs to Date				\$50,000		\$50,000
Totals				\$1,440,000	\$3,232,000	\$5,000,000

3.3 Staffing Plan Recommendations

As part of this planning effort, consideration has been given to program staffing levels. Current and proposed future needs for staff support of the conservation program is presented in this section.

It is recommended that the conservation program be administered by a staff of 3.5 full time equivalents (FTE). Staffing would be provided by a combination of current County staff and contracted support staff. Contract staff would be subject to future approvals by the County Board of Supervisors. For budgeting purposes, the following staffing levels are assumed:

- **Program Manager:** 0.75 FTE will coordinate all water conservation efforts from the 20 programs.
- **Administration Staff:** 0.75 FTE will have the following duties:
 - Schedule inspections and water surveys for residential, commercial, and institutional customers
 - Verify field data in database
 - Document reports
 - Rebate processing
 - Website development
 - Public Education materials
 - Media Campaign materials
 - Attend Farmer's Market Events
 - Attend Toilet Give Away Days
 - Accompany inspectors on site visits if needed
- **Field Inspection Staff:** 2 FTE will have the following duties:
 - Conduct inspections and water surveys
 - Complete data entry into handheld Tablets while in the field
 - When not doing an inspection - help administrative staff with set up and documentation
 - Help administrative staff on other duties as time permits

A budget of \$1.4M is planned for the staff for 3 years of significant effort (Years 1 – 3), which includes direct costs for transportation and supplies.

3.4 Opportunities for Public Agency Partnerships and Stakeholder Groups Participation

County has existing partnerships with a number of public agencies and local stakeholder groups. This Implementation Plan seeks to continue, and where practical, extend these cost-sharing and in-kind partnerships as a means to achieve the program goals at the least cost in addition to maximizing outreach and customer awareness and/or participation. A number of stakeholder advisory groups are currently

volunteering their time and/or efforts to support water conservation. The County is seeking to strengthen these relationships going forward.

3.5 Coordination between County and Los Osos Water Purveyors

Implementation of the water conservation efforts will be more successful through coordination with the local water purveyors. The water purveyors and the County would meet on a regular basis to discuss overarching issues related to current or future program needs (such as customer requests, change needed for greater efficiency, and sharing lessons learned). Now and into the future, it is envisioned that staff from the County and Los Osos water purveyors will work collaboratively together on an as-needed basis to accomplish the conservation program goals and implement the measures.

3.6 Budget

The following summary table includes the budget for all measures for Program Year 1 to Program Year 3. There is a budget for contingency that varies by measure for each program activity after the Program Year 3. The budget includes the following assumptions:

Measure 1A and 3A:

- 9,000 toilets are in the Service Area, with an estimate of 60% higher than 1.6gpf. However a total of 8,000 toilets will actually be replaced. It is not required to replace a toilet if it is a 1.6 gpf.
- Costs were assumed for Option 1 as they are more expensive option, and it is more conservative approach.
- Cost for set up, initial and final inspections, and documentation are covered by the combined cost in measure 1A and 3A. To be cost efficient these two measures have been designed to be run together.
- Assume not all sites have fixtures that need to be replaced or will be certified by licensed plumbers and therefore don't need a Final inspection.

Measure 2A, 2B, 2C, 2D, and 3B:

- Cost for set up, initial and final inspections, and documentation are covered by the combined cost in measures 2A, 2B, 2C, and 3B. To be cost efficient these five measures have been designed to be run together.
- Assume not all sites have fixtures that need to be replaced or will be certified by licensed plumbers and therefore don't need a Final inspection.
- Assume inspectors install spray valves directly when seen in the field during initial or final inspections.

Budget for Program Start-up would include the following activities:

1. Coordinate with Local Water Purveyors budget, staff, and timing of measure implementation

2. Set up database for tracking information
3. Hire and train field inspection staff
4. Hire and train administrative staff project duties
5. Create material for website
6. Create media campaign theme and materials
7. Create rebate forms
8. Bulk purchase toilets, showerhead and aerator kits
9. Bulk purchase spray valves
10. Obtain list of businesses and home owners in Wastewater Service Area and enter into database
11. Purchase computer tablets for data entry during site inspections
12. Purchase any additional supplies for inspections
13. Coordinate recycling program for old fixtures

Table 3-2. Estimated Annual Schedule and Budget for Implementation of Recommended Program Measures Year 1 - 10																																												
Implementation Program Measure Number	Measure	Program Length	YEAR 1 Per Unit Equipment & Installation Cost	Subsequent Years Per Unit Equipment & Installation Cost	Admin and Staff Cost	Program Start Up Budget	Program Year 1		Program Year 2		Program Year 3		Program Year 4		Program Year 4-10		Program Year 6		Total Estimated Activities	Base Estimate	Contingency	Total Budget																						
							Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget	Estimated Schedule of Activities	Estimated Annual Budget																										
Category 1 - Residential Programs																																												
1A	Subsidize Partial Community Retrofit, Residential Toilets	3 Years*	\$250	\$160	15%	\$10,000	3000	\$862,500	3000	\$552,000	2000	\$368,000	0	\$0						8000	\$1,792,500	15%	\$2,061,375																					
	Subsidize Partial Community Retrofit, Residential Showerheads	3 Years*	\$40	\$30	15%	\$10,000	3000	\$138,000	3000	\$103,500	2000	\$69,000	0	\$0						8000	\$320,500	15%	\$368,575																					
	Subsidize Partial Community Retrofit, Residential Faucet Aerators	3 Years*	\$5	\$5	15%	\$10,000	4000	\$23,000	5500	\$31,625	4000	\$23,000	0	\$0						13500	\$87,625	15%	\$100,769																					
1B	Residential Clothes Washer Rebate	5 years	\$150	\$150	15%	\$5,000	400	\$69,000	400	\$69,000	400	\$69,000	0	\$0	400	\$69,000				2000	\$350,000	10%	\$385,000																					
1C	Alternatives for Fully Retrofitted Residences	3 Years*	\$300	\$300	15%	\$1,000	200	\$69,000	150	\$51,750	150	\$51,750	0	\$0						500	\$173,500	15%	\$199,525																					
Category 2 - Commercial and Institutional																																												
2A	Subsidize Partial Community Retrofit, Commercial	3 years	\$1,000	\$1,000	15%	\$5,000	42	\$48,645	56	\$64,860	42	\$48,645	0	\$0						141	\$167,150	15%	\$192,223																					
2B	Replace Restaurant Spray Nozzles	3 years	\$50	\$50	10%	\$1,000	15	\$825	15	\$825	15	\$825	0	\$0						45	\$3,475	5%	\$3,649																					
2C	Institutional Building Retrofit	3 years	\$2,500	\$2,500	10%	\$1,000	4	\$11,000	5	\$13,750	4	\$11,000	0	\$0						13	\$36,750	5%	\$38,588																					
2D	Commercial High Efficiency Clothes Washer Rebate	3 years	\$300	\$300	5%	\$1,000	15	\$4,725	15	\$4,725	10	\$3,150	0	\$0						40	\$13,600	5%	\$14,280																					
Category 3 - Education and Outreach Program																																												
3A	Residential Water Surveys	3 years	\$155	\$155	0%	\$10,000	1500	\$232,500	2000	\$310,000	1500	\$232,500	0	\$0						5000	\$785,000	5%	\$824,250																					
3B	Commercial, Industrial and Institutional Surveys	3 years	\$230	\$230	0%	\$1,000	42	\$9,729	56	\$12,972	42	\$9,729	0	\$0						141	\$33,430	5%	\$35,102																					
3C	Public Information Program	On Going	N/A	N/A	10%	\$5,000	N/A	\$25,000	N/A	\$20,000	N/A	\$20,000	N/A	\$50,000	N/A	\$15,000				N/A	\$210,000	5%	\$220,500																					
3D	Media Campaign	On Going	N/A	N/A	10%	\$5,000	N/A	\$40,000	N/A	\$20,000	N/A	\$20,000	N/A	\$25,000	N/A	\$10,000				N/A	\$170,000	5%	\$178,500																					
Contingency for Additional Measures in Years 4-10															N/A	\$54,600			N/A	\$0	100%	\$327,600																						
Plan Development Cost to Date																																												\$50,000
Total Estimated Start Up and Annual Budgets Year 1- 10						\$65,000		\$1,533,924		\$1,255,007		\$926,599		\$75,000		\$203,200		\$0		\$4,143,530	\$856,404	\$4,999,934																						
Total Estimated Budget w/ Contingency								\$5,000,000																																				

Section 4.0 Monitoring, Evaluation and Tracking

The County is to set up a database to track the relevant conservation program information and periodically issue progress reports such that the program can be evaluated quarterly or semi-annually and adjusted as needed to meet goals and schedules. Budget tracking will be needed with a spreadsheet or database that is kept up on a regular basis.

Each individual residential property, tracked by address and Water Purveyor Customer ID number shall have a record of the following:

- Number and flush volume of toilet (greater than 1.6 gpf, 1.6 gpf, 1.28 gpf or 0.8 gpf); manufacturer and model number if available
- Number and flow rate of showerhead intalled (1.5 gpm or less) ; manufacturer and model number if available
- Number and flow rate of faucet aerators installed (1.5 gpm or less)
- Number of contacts (attempts) to reach customer
- Which toilet/showerhead/faucet aerator replacement option did the homeowner select (Option 1 or 2)
- Which plumber did the installation (in case there are customer call backs about issues)
- Name of field inspector, date of inspection, name of customer contacted for initial inspection
- Name of field inspector, date of inspection, name of customer contacted for verification inspection
- Number of occupants in the home
- When a survey was conducted, findings and follow-up needs
- A copy of the report including which staff conducted survey
- Results of follow-up by staff on recommendations implemented
- Number and type of rebates or other incentives issued Follow up inspection results from verification
- Water use before and after documented changes in replacement of fixtures or other implementation (including behavioral change from survey)
- Customer satisfaction with the program
- Customer complaints

Each individual commercial business or instituional facility shall have a record of the following:

- Number and flush volume of toilet (greater than 1.6 gpf, 1.6 gpf, 1.28 gpf or 0.8 gpf) ; manufacturer and model number if available

- Number and flow rate of shower head installed (1.5 gpm or less) ; manufacturer and model number if available
- Number and flow rate of faucet aerators installed (1.5 gpm or less)
- Number of and flow rate kitchen spray rinse valves (if any) ; manufacturer and model number if available
- Number of and type (air cooled / water cooled) of ice machine if any.
- Number of contacts (attempts) to reach customer
- Which replacement option did the business select (Option 1 or 2)
- Which plumber did the installation (in case there are customer call backs about issues)
- Name of field inspector, date of inspection, name of customer contacted for initial inspection
- Name of field inspector, date of inspection, name of customer contacted for verification inspection
- Follow up inspection results from verification
- Number of employees at the establishment
- When a survey was conducted, findings and follow-up needs
- A copy of the report including which staff conducted survey
- Results of follow-up by staff on recommendations implemented
- Number and type of rebates or other incentives issued Follow up inspection results from verification
- Water use before and after documented changes in replacement of fixtures or other implementation (including behavioral change from survey)
- Customer complaints
- Customer satisfaction with the program

Complete and organized records will be essential for accurate determination of program success.

Program Evaluation

In order to track the success of the program and the reduction of the indoor water use to less than 50 gallons per capita per day (gpcd) the water use should be tracked before and after retrofits. If the home does not decrease in use, then possibly additional occupants have been added to the house or that additional education and outreach is necessary.

Appendices

APPENDIX A
REBATE FORM

SAN LUIS OBISPO COUNTY WATER SAVER REBATE APPLICATION

Important: Please read the application materials carefully and keep a copy for your records. Please type or print clearly in ink, then mail completed application and original cash register receipt and/or plumber's invoice to the SLO County Public Works Department. Use one application per property location. Residential, commercial, industrial, institutional and multi-family applicants are eligible. The number of rebates is dependent upon the availability of program funds. Applications are processed in the order received. Funding is limited, therefore, rebates are not guaranteed.

ASSESSOR'S PARCEL NUMBER _____

PROPERTY OWNER (REBATE CHECK PAYABLE) _____

APPLICATION DATE _____

PHONE _____

PHONE (EVE) _____

BEST TIME TO CALL _____

MAILING ADDRESS _____

YEAR BUILT _____

CITY _____

STATE _____

ZIP CODE _____

Name and address of property where fixtures will be installed:

PROPERTY / SITE NAME (IF APPLICABLE) _____

ADDRESS _____

CITY _____

ZIP CODE _____

FIXTURE REMOVED	QUANTITY	FLOW	FIXTURE INSTALLED	QUANTITY	FLOW
TOILETS			TOILET		
SHOWERHEAD			SHOWERHEAD		
FAUCET AERATOR			FAUCET AERATOR		
CLOTHES WASHER			CLOTHES WASHER		
OTHER			OTHER		

TYPE OF PROPERTY:

House

Apartments (No. of units _____)

Mobile Home

Townhouse / Condominium

Business / Commercial

Schools and Institutions

INSTALLER INFORMATION

I certify that I have removed and installed said fixtures(s) at the subject property. Attached are a copy of the work order and invoice.

LICENSED PLUMBER/INSTALLER

COMPANY NAME

LICENSE NO.

PHONE NO.

SIGNATURE

DATE

AGREEMENT

I have read and understand the program information as stated in the attached application materials. I certify that the said water saver fixture(s) at the subject property were installed. I also understand that by signing here I agree to have an official of my sewer provider verify the installation of the water saver fixture(s) at said property. I agree to hold San Luis Obispo County harmless from any and all liability or claims for damage resulting from or alleged to result from the installation of the fixtures, the inspection of the premises to verify proper installation, and any other activity related to this program.

AUTHORIZED SIGNATURE OF PROPERTY OWNER

DATE

FOR OFFICIAL USE ONLY

Circle Fixtures Inspected - Toilets / Showerheads / Aerators / Clothes Washers / Other _____

Rebate amount _____ Received Original receipt(s) _____

INSPECTION - Performed by _____ Date Inspected _____

Circle one – Approved or Denied Reason for denial _____

How to get your water saver rebate.

For Owner/Residence installed:

1. Schedule pre-inspection to verify eligible water saver fixtures
2. Purchase and install water saver fixtures
3. Schedule a post-inspection to complete and submit rebate
4. Return the original dated receipt with the price, model, and brand of each fixture listed individually, and the completed application. Keep a copy for your records.
5. Property owners will receive rebate checks in approximately 10 working days

For Plumber installed:

1. Contract with a licensed plumber
2. Plumber verifies eligibility, completes retrofit, and may submit certified rebate application on behalf of resident
3. Property owners will receive rebate checks in approximately 10 working days

Qualifications

- Purchase of material must occur after program adoption by the County Board of Supervisors (10/23/2012). Year 1 of the program includes the remainder of 2012 and calendar year 2013.
- The location of installation must be within the wastewater service area.
- Residential, commercial, industrial, institutional and multi-family applicants are eligible.
- A toilet replacement that increases the gallons per flush (gpf) is not eligible for rebate under this program.
- New construction is not eligible for rebate under this program.
- Rebate amounts will depend on the program year the fixtures are installed per the following tables:

Fixtures Purchased by Owner	Year 1	Subsequent Years
Toilets ¹ (1.28 gpf or less)	\$250	\$160
Showerheads (1.5 gpm or less)	\$40	\$30
Faucet Aerators (1.5 gpm or less)	\$5	\$5
Clothes Washers (Tier 3)	\$150	\$150
Other (prior approval required)	\$300	\$300

Fixtures Provided by County	Year 1	Subsequent Years
Toilets ¹ (1.28 gpf or less)	\$160	\$160
Showerheads (1.5 gpm or less)	\$40	\$30
Faucet Aerators (1.5 gpm or less)	\$5	\$5
Clothes Washers (Tier 3)	\$150	\$150
Other (prior approval required)	\$300	\$300

¹Eligible expenses include 1.28 or less gallon per flush tank, bowl, seat, supply line, wax ring, caulking, bolts, bolt covers, 1.5 or less gallon per minute showerheads, 0.5 or less gallon per minute faucet aerators, clothes washers with a water factor of 4.0 or less and tax.

Permitting

Building permits are not required when a residential customer simply removes and installs a fixture on existing plumbing. A permit is required for plumbing fixture relocations or business customers.

Disclaimer

The County of San Luis Obispo reserves the right to deny an application of any participant who does not meet all requirements as outlined. The County of San Luis Obispo reserves the right to change the terms of this program at their discretion. The County of San Luis Obispo is not responsible for the receipts or paperwork lost in the U.S. Mail. The County of San Luis Obispo cannot guarantee that the installation of the water saver fixtures will result in lower water utility costs. The number of rebates is dependent upon the availability of program funds. Applications will be processed when all required information is provided by the applicant.

Mail the application and original cash register receipt and/or plumber's work order invoice to the address listed below. For more information, call San Luis Obispo County at (805) 781-5252 x2110; fax (805) 781-1229, email: pwd@co.slo.ca.us or send application to:
 County Government Center, Room 207
 San Luis Obispo, CA 93408

APPENDIX B
LIST OF BUSINESS IN WASTEWATER SERVICE AREA

Appendix B: List of Businesses in Wastewater Service Area

Measure 2A, 2B, 2C, 2D – list of businesses in Los Osos Wastewater Project Service Area

Food establishments

- 1 10th Street Grill
- 2 Be Love Café
- 3 Big Daddy's Pizza
- 4 Brigadune's Pizza
- 5 Carlock's bakery
- 6 Celia's Garden Café
- 7 Central Coast Roasting Company
- 8 China Palace
- 9 Distasio's Italian Restaurant
- 10 Domino's Pizza
- 11 Good Tides Coffee House
- 12 Hong Kong Chinese
- 13 Jaj Residential Café
- 14 Jimmy Bump's Pasta House
- 15 La Casita Mexican Food
- 16 La Palapa Café
- 17 Maya's
- 18 Merrimaker
- 19 Ostini's Food and Deli
- 20 Round Table Pizza
- 21 Sea Pines Golf Course Club House
- 22 Starbuck's
- 23 Subway
- 24 Sweet Alexis
- 25 Sweet Springs Saloon
- 26 Sylvester's
- 27 Taco Roco

Grocery Store

- 1 Ralph's
- 2 Vons
- 3 Baywood Market
- 4 Ingan Fresh Produce

Hotels

- 1 Back Bay Inn

- 2 Baywood Bed & Breakfast
- 3 Sea Pines Golf Course Resort
- 4 Morro Bay Luxury Rentals

Other Business

- 1 Abundance Shop
- 2 American Threadwork
- 3 Amsoil dealer
- 4 Apex Tactical Specialties
- 5 Art is for Everyone
- 6 At your services screens (window)
- 7 Ausiender Realty Group
- 8 Awards by Jo Ann
- 9 Bailey Medical Engineering
- 10 Barbershop Singing
- 11 Barbey-Green Sea Horse
- 12 Bay Back Styling (Haircut)
- 13 Bay Osos Residential Care
- 14 Bay-Osos Mini Storage
- 15 Bayside Martial Arts
- 16 Baywood Realty
- 17 Bear Valley Animal Clinic
- 18 Bear Valley Chevron
- 19 Best Beauty Supplies & Salon
- 20 Bis Software
- 21 Blind Lady
- 22 Breakthrough Art Studio
- 23 Cal Fire Station 15-South Bay
- 24 Cental Coast Autohaus
- 25 Central Coast Appliance
- 26 Central Coast Body Therapy
- 27 Central Coast Books
- 28 Central Coast Dance & Arts
- 29 Change of a Dress

Other Business (Cont.)

- 30 Classy Cuts
- 31 Connie's Cut & Sew
- 32 Cuesta Medical Group

33	Don's Auto Repair	71	Medicine Shop
34	Dream Wear	72	Miner's Ace Hardware
35	Eliane Hyde Art Glass	73	More Diagnostics
36	Enjoy Art Gallery	74	Mustang Computers
37	EZ Nature Books	75	Oasis Equipment Rental
38	Five Seasons Body Conditioning	76	Orchids of Los Osos
39	Frame Shop	77	Out on the Bay
40	Games Exchange	78	Paradise Outdoors
41	Go Westly	79	Personal Computer Tutor
42	Golden Care	80	Prema Toy
43	Griswold's Radiator	81	Prudential Hunter Realty
44	Hub's Upholstery	82	Rantec Power Systems
45	Jio Steven Optometrist	83	Rincon Construction
46	John Ramos Art and Design	84	Rite Aid
47	Johnson Starling Associates (Office)	85	Robobank
48	Just's Restorations	86	Rock Art Picture Show
49	Kids with Style	87	Sage Eco Gardens
50	Leap Institute of Digital Imaging	88	San Luis Coin Op Laundry Machine
51	Light Photographic Workshops		
52	Los Osos Autobody	89	San Luis Obispo Coast Patrol
53	Los Osos Book Exchange	90	Sea Gardens
54	Los Osos Chamber of Commerce	91	Small Area Wilderness Preserve
55	Los Osos Community Services District	92	Smithy's Auto Center
56	Los Osos Early Care & Education Center	93	South Bay Community Center
57	Los Osos Fitness	94	South Bay Dental Office
58	Los Osos Flower Market	95	Sterling Car Care
59	Los Osos Glass and Screen	96	The 1 Audio
60	Los Osos Mexican Market	97	The Best Appliance Guy
61	Los Osos Pet Hospital	98	Tutt Tree Services
62	Los Osos Phone and Wireless	99	U.S. Bank
63	Los Osos Public Library	100	Upper Story Design
64	Los Osos Residential Care	101	US Post Office
65	Los Osos Rexall Drug	102	Valley Liquor
66	Los Osos Valley Nursery	103	Volumes of Pleasure Bookshoppe
67	Mace Security	104	Weddings on the Bay
68	Main Mini Storage	105	White's Carpet
69	Mark's Baywood Cyclery	106	YMCA - fitness and childcare
70	Marshall Gardens		