

# **Review of Regional Conservation Program Options 2011-13**

**Seattle Water Supply System  
Operating Board**

**September 2, 2010**

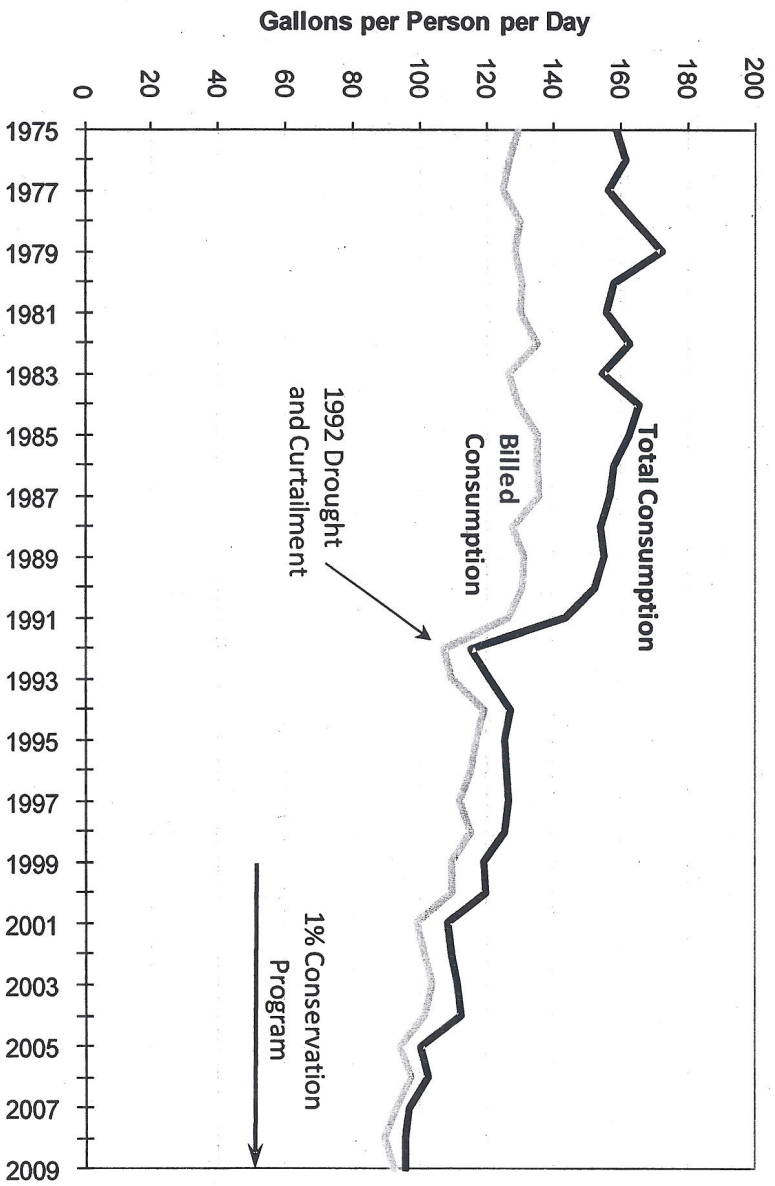
## **Purpose and Agenda**

- Purpose: Operating Board review and comment on regional conservation program options for 2011-2013
- Agenda:
  - *Conservation Goals and Savings Targets (background – 10 minutes)*
  - *Regional Conservation Program Options (review – 25 minutes)*
  - *Setting next 6-Year WUE Goal (looking forward – 5 minutes)*

## Regional Conservation Program Savings Targets – when, why, what and outcomes

When	Why	What = Goals and Savings Targets	Outcomes
2000-2010 1% Program	New source of supply	<ul style="list-style-type: none"> <li>• Goal: Keep water demand flat (despite growth in pop. and economic activity)</li> <li>• Savings Target: 11 mgd of cumulative savings</li> </ul>	<ul style="list-style-type: none"> <li>• Goal met: Demand lower than in 2000 (see p. 4)</li> <li>• Expected Tally: 9.5 mgd of cumulative savings</li> </ul>
2011-2030 Regional Baseline Program	<ul style="list-style-type: none"> <li>• Climate uncertainty</li> <li>• Benefits to managing water resource</li> <li>• Customers manage bills</li> </ul>	<ul style="list-style-type: none"> <li>• Savings Target: 15 mgd of cumulative savings from both hardware and behavior programs</li> <li>• Include price savings (see p. 5)</li> </ul>	<p>Note: Program intensity likely to vary by year</p>
2007-2012	Regulatory – WUE Rule 6-Year Goal for SPU WSP	<ul style="list-style-type: none"> <li>• Goal 2007-2010: 4 Years of 1% Program</li> <li>• Goal 2011-2012: 2 Years of Regional Baseline Program</li> </ul>	<ul style="list-style-type: none"> <li>• Goal 2007-2010 met: Demand lower than in 2000</li> <li>• Savings Target 2011-12: TBD</li> </ul>

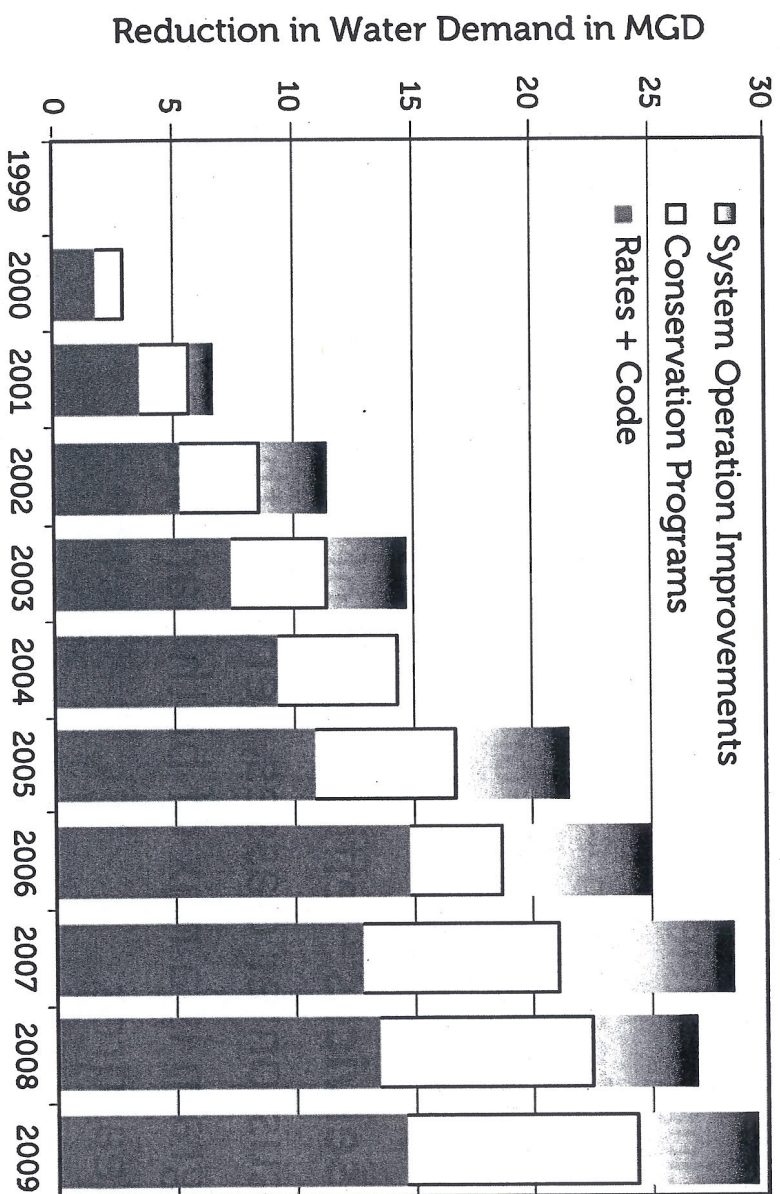
# Seattle Regional System Water Consumption Per Person: 1975- 2009 (Water Demand / Population Served)





# Regional Cumulative Water Savings Since 1999

Chart 4: Cumulative Water Savings<sup>1</sup> Since 1999



<sup>1</sup> The measure of cumulative savings over time merits more confidence than the estimates of annual savings in any one year. All program categories are shown as annual average savings.

## Regional Conservation Program Overview

- **Saving Water Partnership** – administered by SPU with 17 participating utilities; began in 2000
- **Regional partnership** – Operating Board sets long-term goals; Conservation Technical Forum helps with program selection and service delivery
- **Regional services** – efficiencies of scale (administrative costs), serve all customer classes, services throughout geographic area, program is a mix of both hardware (CIP) and behavior (O&M) measures
- **Discussion with DOH** – after MWL Water Use Efficiency Rule; agreement on regional services and regional reporting

## **2010 Conservation Potential Assessment and Program Intensity Options**

- **Purpose:** Estimate water saving potential and cost for Program Options for Regional Program 2011-2013
- **Model:** Alliance for Water Efficiency “Tracking Tool”
- **Timeframe:** 3-Years to align with Operating Board Facility Charge Renewal (based on CIP level of conservation program funding)
- **Analysis:** 5 Program Options of Varying Intensity for review
- **Price Savings:** For short-term, estimated to be higher than in previous years
- **Review:**
  - August 18 – SPU Water System Advisory Committee
  - August 24 – Conservation Technical Forum (letter attached)
  - September 2 – Operating Board
- **Decision:**
  - September 14 – SPU Asset Management Committee



## 2010 1% Regional Conservation Program

Hardware Program - \$2.2 million CIP	Behavior Program - \$386,000 O&M
<p>Annual water savings expected - .4 mgd</p> <ul style="list-style-type: none"> <li>• Replace washing machines – “WashWise” rebates</li> <li>• Replace inefficient toilets, showerheads &amp; faucet aerators – rebates and giveaways</li> <li>• Upgrade irrigation system controllers, rain sensors, drip – rebates</li> <li>• Upgrade equipment for cooling, process and other industrial uses – rebates</li> <li>• New construction incentives – rebates</li> </ul>	<p>Annual water savings expected - .1 mgd</p> <ul style="list-style-type: none"> <li>• Festivals, utility “open house” events</li> <li>• Messaging to encourage efficient indoor behaviors (fix leaks, toilet flushes, faucet use, shower time, full loads)</li> <li>• Messaging to encourage efficient outdoor behaviors (landscape watering, mulching, soil prep, plant selection)</li> <li>• Youth education – “Water Busters Game”</li> </ul>

# Five Program Options for Consideration compared to Current 1% Program

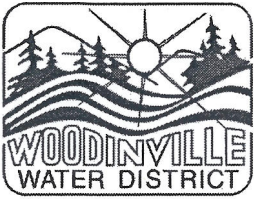
Note: All Options include current Behavior Programs and add *Leak Prevention Education* \*

Program	Hardware Measures	Estimated Annual mgd Savings	Annual Funding – 2010 \$ (Average Levelized Cost)
<b>Current 1% Program –</b> Certainty of cost and savings			
	See list p. 8	.4 mgd – Hardware .1 mgd – Behavior	\$2.2 million CIP (est. \$1.09) \$386,000 O&M
<b>Option 1 – Focus on long-life measures</b>			
	Less intense than 1% - eliminate “WashWise” + MF and SF irrigation retrofit	.29 mgd – Hardware .17 mgd – Behavior	\$1.5 million CIP (\$0.96) \$553,000 O&M*
<b>Option 2 – Reduce # of “WashWise” and irrigation projects</b>			
	Less intense than 1% (reduce participation in highest \$ measures)	.37 mgd – Hardware .17 mgd – Behavior	\$1.9 million CIP (\$1.02) \$553,000 O&M*
<b>Option 2A – Same as 2; add pilot innovative measures; <u>CTF recommendation</u></b>			
	Less intense than 1%; pilot “Living Building” + rainwater catchment	.38 mgd – Hardware .17 mgd – Behavior	\$2.2 million CIP (\$1.14) \$553,000 O&M*
<b>Option 3 – Regional Baseline – certainty of cost and savings</b>			
	Similar intensity and focus of 1% Program	.4 mgd – Hardware .17 mgd – Behavior	\$2.2 million CIP (\$1.09) \$553,000 O&M*
<b>Option 4 – Regional Baseline add innovative measures</b>			
	Increased intensity to 1% Program; add 5 “Living Building” + rainwater catchment	.57 mgd – Hardware .17 mgd – Behavior	\$5.8 million CIP (\$1.95) \$553,000 O&M*



## **2013-18 WUE Goal Setting**

- SPU will consult with Operating Board prior to setting 6-Year conservation goal in SPU 2013 Water System Plan
- Preliminary analysis shows that less costly savings may come from new approaches
- Policy discussion with range of stakeholders will be conducted as part of SPU Water System Plan process
- Operating Board members will be requested to adopt regional program 6-Year Goal and any additional individual utility goals



## WOODINVILLE WATER DISTRICT

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### COMMISSIONERS

Ed Cebron  
Kenneth Goodwin  
Tim Matson  
Sandra L. Smith  
Karen Steeb

### GENERAL MANAGER

Ken Howe

August 30, 2010

Mr. Matt Everett  
Chair, Seattle Water Supply  
Operating Board  
c/o Highline Water District  
PO Box 3867  
Kent, WA 98089-3867

RE: Regional Conservation Program Options 2011 – 2013

Dear Mr. Everett:

It is my understanding that the Operating Board will be meeting with Seattle staff on September 2, 2010 to determine what level of conservation should be set/funded from 2011 – 2013. The Conservation Technical Forum (CTF) met yesterday to review our regional conservation program and to develop a recommendation for the Operating Board for the 2011 – 2013 regional conservation program. This letter is to advise you of our recommendation.

We reviewed the program goals and savings targets, the regional cumulative water savings since 1999 and then we discussed the Conservation Potential Assessment and the new analysis tool that is being used by Seattle and many other organizations throughout the nation to estimate water savings. We reviewed four program options. Seattle staff will be providing the Operating Board with updated handouts and additional information and analysis on September 2<sup>nd</sup> that reflect the CTF recommendation. Below, I am providing comments from the Conservation Technical Forum as a whole on each one of the four options and then finally, our committee's recommendation for your consideration.

We used the following criteria to rank each option:

- Cost
- Water Savings
- Equity across customer classes
- Preserve capacity
- Geographic equity
- Innovation and Leadership

All options presented include \$386,000 for O & M Programs and \$167,000 for a regional leak fixing behavioral program. The only differences between the four options presented were in the CIP funded portions of the program.

Option 1: This option is less intense than the current 1% Program and it significantly reduces single-family and multi-family programs, concentrating on commercial/industrial/institutional programs. The cost of this option is estimated to cost \$500,000 less than the current reduced budget program and does not appear to be an option that promoted equity among the customer classes.

Option 2: This option is also less intense than our current 1% program with a reduced emphasis on single-family programs, however there are single-family programs in this option. The CIP budget for this option is estimated to cost



\$100,000 less than the current reduced budget program and does meet the criteria listed above with the exception of innovation and leadership.

Option 3: This option is the most similar to our current reduced budget program and staff is confident that we could stay within our budgeted amount and we would see projected savings. It is different from Option 2 in that it increases the number of clothes washer and irrigation rebates for both residential and multi-family or commercial customers. However, this option doesn't keep us moving in a forward thinking manner, exploring new options for water savings.

Option 4: This option is our existing program with innovative measures added. It includes rainwater catchment/water reuse programs for all customer classes and is estimated to more than double the cost of our current reduced budget program. It meets all the criteria, including innovation and leadership but at a very high monetary cost.

In our discussion about these four options, the committee was sensitive to our economic conditions and our region's current reduced consumption during our cooler than normal summer.

**Recommendation:**

Our recommendation is to choose a modified version of Option 2. Option 2 keeps but reduces the single-family hardware programs. We would like to enhance this option with a small portion (\$300,000) of Option 4's rainwater catchment / water reuse program features listed in the handouts to continue to move forward with innovative ideas. These could be in the form of pilot projects deemed to be most cost effective. Although this does not maintain the same level of savings as the current program, there are future benefits by adding some innovative measures. This approach would keep our program at a similar cost to the current program with a CIP budget of \$2.2 million dollars (the \$1.9 million recommendation in Option 2 with the addition of \$300,00 for the innovative measures listed in Option 4. The new innovative projects would be approved on a case by case basis by the Conservation Technical Forum.

We'd also like to note that we believe it is very important to keep the amount of O & M money (\$553,000) for behavior and education programs and to keep Seattle's proposed behavior program for fixing leaks. It isn't a lot for the entire region, but we have been able to work together to create many successful programs and events for customers. The new proposed leak program has been successful in other agencies conservation programs at reducing the amount of water lost due to toilet leaks. This program would empower the public to check for leaks and reduce water running to waste.

In addition, many purveyor and Seattle staff are reporting an increase in the number of customer requests for information on waterwise gardening who want to know how to reduce their use of potable water. Classes and information programs to assist these customers are in the O & M Budget and aren't as easily measured, but behavior change programs are very important and they are wanted and appreciated by our customers. They have told us they look to us for this information to help them reduce their water consumption. We would like to increase this amount, but recognize that it is not possible in this economic climate.

Thank you for the opportunity to provide this input. If the Operating Board selects an Option that provides less water savings, we have asked Seattle to determine if this will have an impact on the Water Use Efficiency Rule and our agreement/understanding with DOH. Would each utility have to implement more conservation elements or would each utility have to go through another public process to change our goal. SPU will be prepared to answer these questions at the Operating Board meeting. Please let me know if you have any questions. Option matrix attached.

Sincerely,



Deborah Rannfeldt  
Chair, Conservation Technical Forum



## SWP Regional Conservation 2011 - 2013

### Program Option Ranking

All Options include: \$386,000 O and M money for Behavior Savings and \$167,000 for Behavior Program for Leak Fixing. Options below are for CIP Program dollars.

	Positive	Neutral	Negative	Comments
<b>Option 1 - Less intense than 1% Program</b>				
Cost x				
Water Savings			x	
Equity Across Customer Classes			x	Removes many programs that have been utilized by lower income households.
Preserve Capacity		x		
Geographic Equity			x	
Innovation and Leadership			x	
Consistency and Predictability			x	
<b>Option 2 - Less intense than 1% Program</b>				
Cost x				
Water Savings x				
Equity Across Customer Classes x				
Preserve Capacity x				
Geographic Equity x				
Innovation and Leadership			x	
Consistency and Predictability		x		Similar to current program.
<b>Option 3 - Similar intensity to 1% Program</b>				
Cost		x		
Water Savings x				
Equity Across Customer Classes x				
Preserve Capacity x				
Geographic Equity x				
Innovation and Leadership			x	
Consistency and Predictability		x		Similar to current spending.
<b>Option 4 - Increased intensity to 1% Program</b>				
<b>Includes two non-potable measures</b>				
Cost			x	
Water Savings x				
Equity Across Customer Classes		x		Higher probability of projects getting innovation funding in wealthier areas.
Preserve Capacity x				
Geographic Equity		x		Higher probability of projects getting innovation funding in wealthier areas.
Innovation and Leadership x				
Consistency and Predictability			x	Large cost increase in one year.

**Recommendation:** Our discussion meeting included reps from Seattle, Cedar River, City of Bothell, Northshore, Soos Creek, WD 119, and Woodinville. We received approval of our letter to the Operating Board from all but one purveyor agency (no response). We received 4 program ranking forms. Three of the program ranking forms concurred with this sheet. The fourth form concurred with the recommendation, but was neutral regarding geographic equity and preserving capacity. The committee would like the Operating Board to consider Option 2 with added innovation measures from Option 4 that are outlined in the letter, bringing the funding level to the current program funding.

# **Seattle Water Supply System**

## **Operating Board**

### **September 2, 2010**

#### **Review of Regional Conservation Program Options 2011-13**

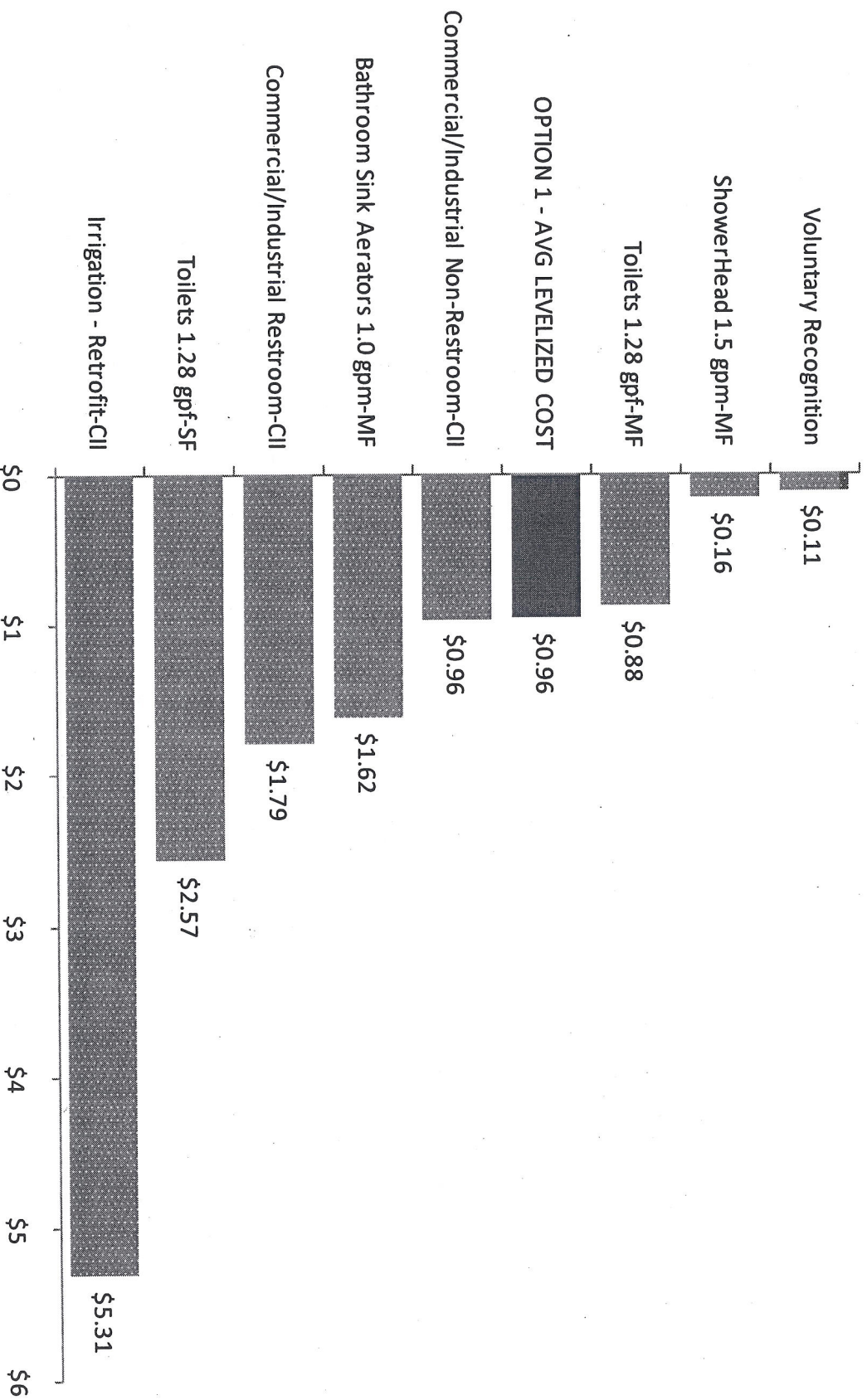
##### **Reference Materials Attached:**

<b>Document</b>	<b>Page</b>
Levelized Cost 3 Year Program Options	1-4
Details for 3-Year Conservation Options	5-8
Selection Criteria and Definitions	9-10
Program Measure Glossary	11-12



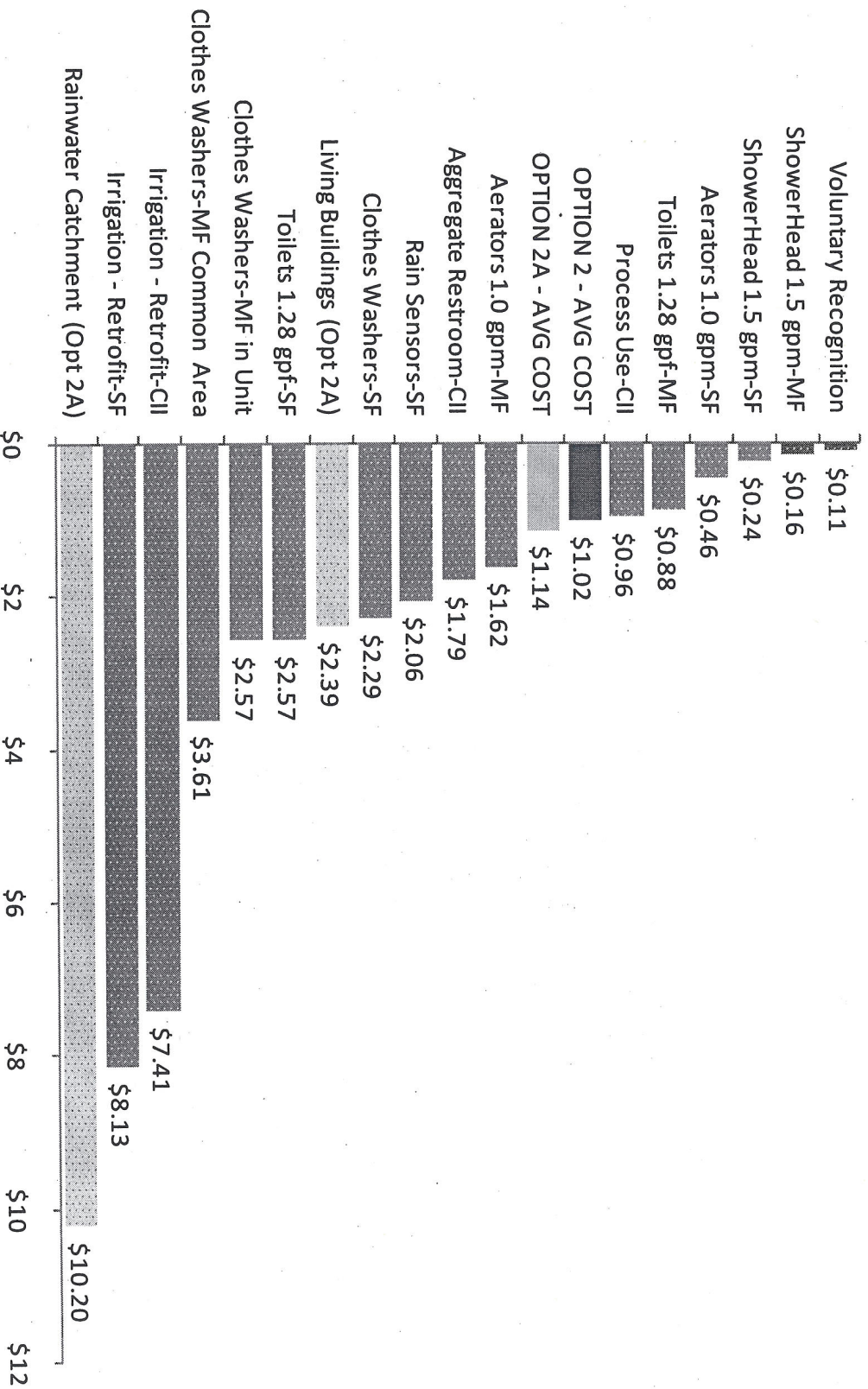
## Focus on Long-Life Measures

### Option 1: Present Value Total SPU Costs per CCF



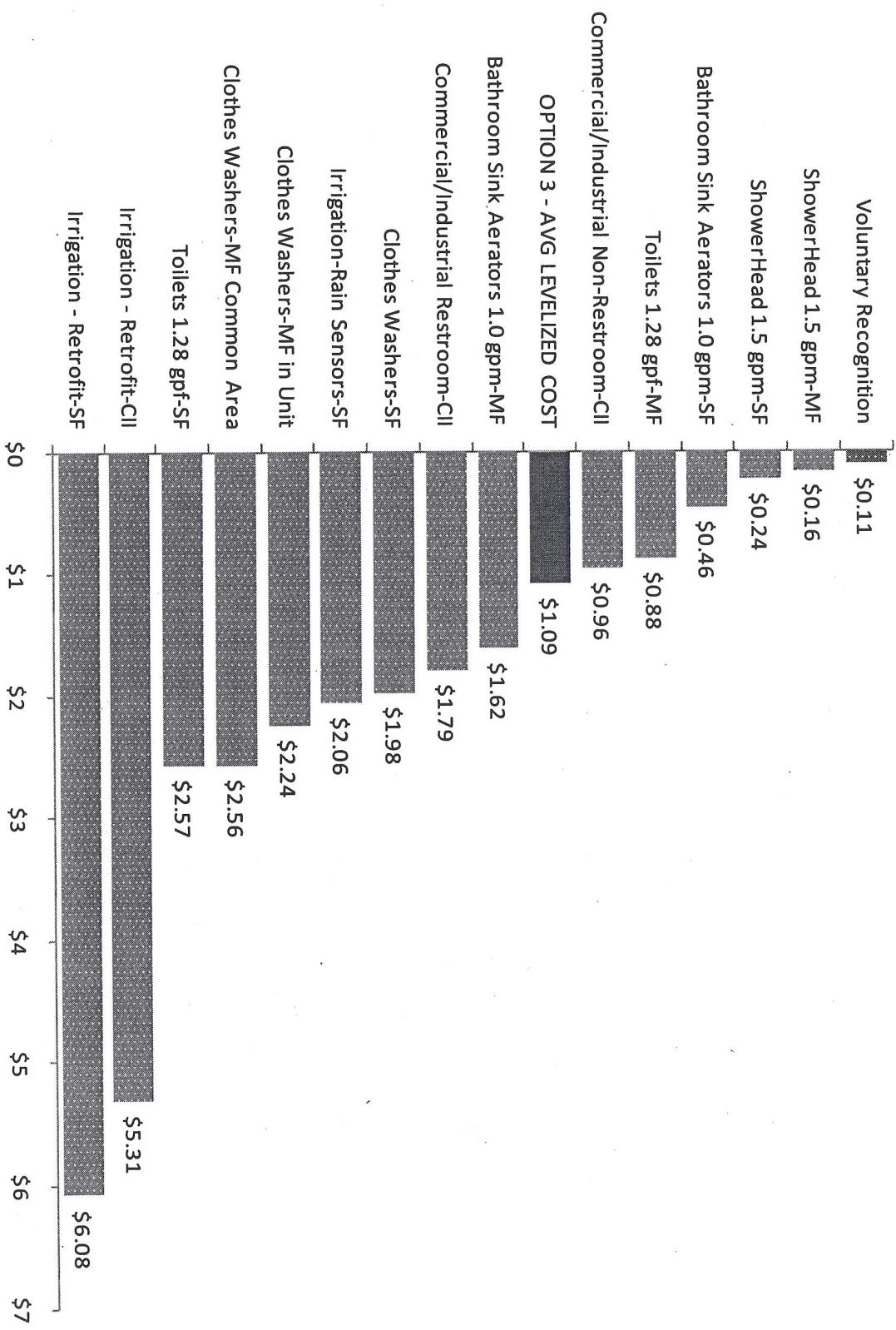
# Regional Baseline with Reduced Clothes Washer & Irrigation Measures (Option 2A Adds Pilot Innovative Measures)

## Options 2 & 2A: Present Value Total SPU Costs per CCF



# Regional Baseline - Certainty of Cost and Savings

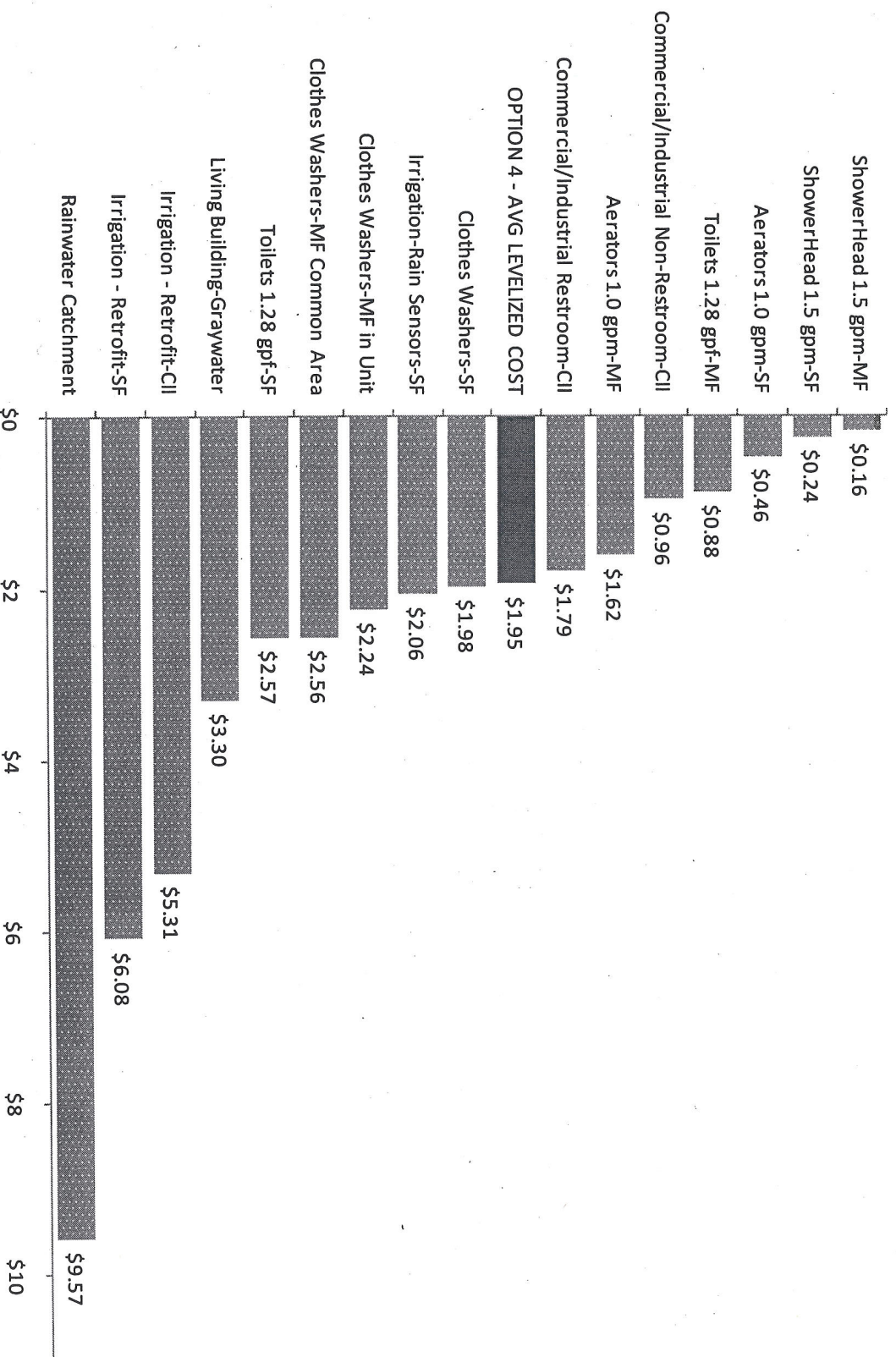
## Option3: Present Value Total SPU Costs per CCF





# Regional Baseline with Innovative Measures

Option 4: Present Value Total SPU Cost per CCF



## Details for 3-Year Conservation Program Options

### Option 1: Activity Levels, Costs, & Savings with Focus on Long-Life Measures through 2013

	Number of Participants			3 Yr Cost	3 Year			
	2011	2012	2013	in 2010 \$s	Savings	1 Yr Total	1 Yr Fixed	1 Yr Variable
ShowerHead 1.5 gpm-MF	2,052	2,052	2,052	\$36,312	0.048	\$12,104	\$8,000	\$4,104
Toilets 1.28 gpf-MF	2,280	2,280	2,280	\$1,283,250	0.203	\$427,750	\$100,000	\$327,750
Bathroom Sink Aerators 1.0 gpm-MF	2,052	2,052	2,052	\$35,927	0.010	\$11,976	\$8,000	\$3,976
ShowerHead 1.5 gpm-SF	0	0	0	\$0	0.000	\$0	\$0	\$0
Toilets 1.28 gpf-SF	400	400	400	\$291,000	0.018	\$97,000	\$85,000	\$12,000
Bathroom Sink Aerators 1.0 gpm-SF	0	0	0	\$0	0.000	\$0	\$0	\$0
Clothes Washers-MF Common Area	0	0	0	\$0	0.000	\$0	\$0	\$0
Clothes Washers-MF in Unit	0	0	0	\$0	0.000	\$0	\$0	\$0
Clothes Washers-SF	0	0	0	\$0	0.000	\$0	\$0	\$0
Dishwashers-MF								
WaterSense New Construction-SF								
Efficient New Construction-MF								
ShowerHead 1.5 gpm-CII								
Gravity Toilets 1.28 gpf-CII								
Flushometer 1.6 gpf-CII								
Urinal 0.5 gpf-CII								
Public Faucet 0.5 gpm-CII								
Non-Public Aerator 1 gpm-CII								
Commercial/Industrial Non-Restroom	30	30	30	\$1,522,320	0.288	\$507,440	\$336,500	\$170,940
Irrigation New Construction-CII								
Irrigation - Retrofit-CII	20	20	20	\$612,000	0.028	\$204,000	\$104,000	\$100,000
Irrigation New Construction-SF								
Irrigation - Retrofit-SF	0	0	0	\$0	0.000	\$0	\$0	\$0
Irrigation-Rain Sensors-SF	0	0	0	\$0	0.000	\$0	\$0	\$0
Code-Clothes Washer 4.5-SF								
Code-Clothes Washer 4.5-MF								
Code-HET 1.28 gpf-SF								
Code-HET 1.28 gpf-MF								
Code-Showerhead 2 gpm-SF								
Code-Showerhead 2 gpm-MF								
Code-Aerator 1.5 gpm-SF								
Code-Aerator 1.5 gpm-MF								
Dishwashers-SF								
Commercial/Industrial Restroom-CII	21	21	21	\$694,624	0.047	\$231,541	\$189,500	\$42,041
Voluntary Recognition	1,500	1,500	1,500	\$102,000	0.117	\$34,000	\$0	\$34,000
<b>COSTS (2010 \$s)</b>	<b>\$1,525,811</b>	<b>\$1,525,811</b>	<b>\$1,525,811</b>	<b>\$4,577,433</b>	-	<b>\$1,525,811</b>	<b>\$831,000</b>	<b>\$694,811</b>
<b>COSTS (Inflated Budget \$s)</b>	<b>\$1,556,327</b>	<b>\$1,587,454</b>	<b>\$1,619,203</b>	<b>\$4,762,984</b>	-	-	-	-
<b>ACTIVE SAVINGS*</b>	<b>0.25</b>	<b>0.25</b>	<b>0.25</b>	-	<b>0.76 mgd</b>	-	-	-
<b>TOTAL PROGRAM SAVINGS*</b>	<b>0.29</b>	<b>0.29</b>	<b>0.29</b>	-	<b>0.86 mgd</b>	-	-	-

\* Active Savings excludes savings from "freeriders," i.e., participants that would be expected to adopt a particular measure even in the absence of financial incentives. Total Program Savings, which include savings from freeriders, is used in calculating program savings as is done in the Saving Water Partnership Annual Reports.



## Option 2: Activity Levels, Costs, & Savings for Regional Baseline with Reduced Clothes Washer & Irrigation Measures

	Number of Participants			3 Yr Cost in 2010 \$s	3 Year Savings	1 Yr Total	1 Yr Fixed	1 Yr Variable
	2011	2012	2013					
ShowerHead 1.5 gpm-MF	2,052	2,052	2,052	\$36,312	0.048	\$12,104	\$8,000	\$4,104
Toilets 1.28 gpf-MF	2,280	2,280	2,280	\$1,283,250	0.203	\$427,750	\$100,000	\$327,750
Bathroom Sink Aerators 1.0 gpm-MF	2,052	2,052	2,052	\$35,927	0.010	\$11,976	\$8,000	\$3,976
ShowerHead 1.5 gpm-SF	4,000	4,000	4,000	\$90,000	0.084	\$30,000	\$0	\$30,000
Toilets 1.28 gpf-SF	400	400	400	\$291,000	0.018	\$97,000	\$85,000	\$12,000
Bathroom Sink Aerators 1.0 gpm-SF	4,000	4,000	4,000	\$18,600	0.018	\$6,200	\$0	\$6,200
Clothes Washers-MF Common Area	40	40	40	\$76,017	0.006	\$25,339	\$14,939	\$10,400
Clothes Washers-MF in Unit	490	490	490	\$150,129	0.013	\$50,043	\$13,293	\$36,750
Clothes Washers-SF	2,250	2,250	2,250	\$701,250	0.067	\$233,750	\$65,000	\$168,750
Dishwashers-MF								
WaterSense New Construction-SF								
Efficient New Construction-MF								
ShowerHead 1.5 gpm-CII								
Gravity Toilets 1.28 gpf-CII								
Flushometer 1.6 gpf-CII								
Urinal 0.5 gpf-CII								
Public Faucet 0.5 gpm-CII								
Non-Public Aerator 1 gpm-CII								
Commercial/Industrial Non-Restroom	30	30	30	\$1,522,320	0.288	\$507,440	\$336,500	\$170,940
Irrigation New Construction-CII								
Irrigation - Retrofit-CII	9	9	9	\$387,000	0.013	\$129,000	\$84,000	\$45,000
Irrigation New Construction-SF								
Irrigation - Retrofit-SF	14	14	14	\$138,000	0.004	\$46,000	\$39,000	\$7,000
Irrigation-Rain Sensors-SF	400	400	400	\$216,000	0.046	\$72,000	\$52,000	\$20,000
Code-Clothes Washer 4.5-SF								
Code-Clothes Washer 4.5-MF								
Code-HET 1.28 gpf-SF								
Code-HET 1.28 gpf-MF								
Code-Showerhead 2 gpm-SF								
Code-Showerhead 2 gpm-MF								
Code-Aerator 1.5 gpm-SF								
Code-Aerator 1.5 gpm-MF								
Dishwashers-SF								
Commercial/Industrial Restroom-CII	21	21	21	\$694,624	0.047	\$231,541	\$189,500	\$42,041
Voluntary Recognition	1,500	1,500	1,500	\$102,000	0.117	\$34,000	\$0	\$34,000
<b>COSTS (2010 \$s)</b>	<b>\$1,914,143</b>	<b>\$1,914,143</b>	<b>\$1,914,143</b>	<b>\$5,742,429</b>	-	<b>\$1,914,143</b>	<b>\$995,232</b>	<b>\$918,911</b>
<b>COSTS (Inflated Budget \$s)</b>	<b>\$1,952,426</b>	<b>\$1,991,475</b>	<b>\$2,031,304</b>	<b>\$5,975,204</b>	-	-	-	-
<b>ACTIVE SAVINGS*</b>	<b>0.33</b>	<b>0.33</b>	<b>0.33</b>	-	<b>0.98 mgd</b>	-	-	-
<b>TOTAL PROGRAM SAVINGS*</b>	<b>0.37</b>	<b>0.37</b>	<b>0.37</b>	-	<b>1.10 mgd</b>	-	-	-

\* Active Savings excludes savings from "freeriders," i.e., participants that would be expected to adopt a particular measure even in the absence of financial incentives. Total Program Savings, which include savings from freeriders, is used in calculating program savings as is done in the Saving Water Partnership Annual Reports.

### For Option 2A

Rainwater Catchment	0	90	90	\$593,980	0.008	\$296,990	Each of 2 years	
Living Buildings	1	0	0	\$300,000	0.015	\$100,000	Averaged over 3 yrs	
<b>COSTS (2010 \$s)</b>	<b>\$2,212,136</b>	<b>\$2,212,136</b>	<b>\$2,212,136</b>	<b>\$6,636,409</b>		<b>\$297,993</b>	<b>Avg for Innovative Meas.</b>	
<b>TOTAL PROGRAM SAVINGS*</b>	<b>0.38</b>	<b>0.37</b>	<b>0.37</b>	-	<b>1.13 mgd</b>			



### Option 3: Activity Levels, Costs, & Savings with Regional Baseline Continued through 2013

	Number of Participants			3 Yr Cost	3 Year			
	2011	2012	2013	in 2010 \$s	Savings	1 Yr Total	1 Yr Fixed	1 Yr Variable
ShowerHead 1.5 gpm-MF	2,052	2,052	2,052	\$36,312	0.048	\$12,104	\$8,000	\$4,104
Toilets 1.28 gpf-MF	2,280	2,280	2,280	\$1,283,250	0.203	\$427,750	\$100,000	\$327,750
Bathroom Sink Aerators 1.0 gpm-MF	2,052	2,052	2,052	\$35,927	0.010	\$11,976	\$8,000	\$3,976
ShowerHead 1.5 gpm-SF	4,000	4,000	4,000	\$90,000	0.084	\$30,000	\$0	\$30,000
Toilets 1.28 gpf-SF	400	400	400	\$291,000	0.018	\$97,000	\$85,000	\$12,000
Bathroom Sink Aerators 1.0 gpm-SF	4,000	4,000	4,000	\$18,600	0.018	\$6,200	\$0	\$6,200
Clothes Washers-MF Common Area	80	80	80	\$107,217	0.012	\$35,739	\$14,939	\$20,800
Clothes Washers-MF in Unit	980	980	980	\$260,379	0.025	\$86,793	\$13,293	\$73,500
Clothes Washers-SF	4,540	4,540	4,540	\$1,216,500	0.134	\$405,500	\$65,000	\$340,500
Dishwashers-MF								
WaterSense New Construction-SF								
Efficient New Construction-MF								
ShowerHead 1.5 gpm-CII								
Gravity Toilets 1.28 gpf-CII								
Flushometer 1.6 gpf-CII								
Urinal 0.5 gpf-CII								
Public Faucet 0.5 gpm-CII								
Non-Public Aerator 1 gpm-CII								
Commercial/Industrial Non-Restroom	30	30	30	\$1,522,320	0.288	\$507,440	\$336,500	\$170,940
Irrigation New Construction-CII								
Irrigation - Retrofit-CII	20	20	20	\$612,000	0.028	\$204,000	\$104,000	\$100,000
Irrigation New Construction-SF								
Irrigation - Retrofit-SF	20	20	20	\$147,000	0.006	\$49,000	\$39,000	\$10,000
Irrigation-Rain Sensors-SF	400	400	400	\$216,000	0.046	\$72,000	\$52,000	\$20,000
Code-Clothes Washer 4.5-SF								
Code-Clothes Washer 4.5-MF								
Code-HET 1.28 gpf-SF								
Code-HET 1.28 gpf-MF								
Code-Showerhead 2 gpm-SF								
Code-Showerhead 2 gpm-MF								
Code-Aerator 1.5 gpm-SF								
Code-Aerator 1.5 gpm-MF								
Dishwashers-SF								
Commercial/Industrial Restroom-CII	21	21	21	\$694,624	0.047	\$231,541	\$189,500	\$42,041
Voluntary Recognition	1,500	1,500	1,500	\$102,000	0.117	\$34,000	\$0	\$34,000
<b>COSTS (2010 \$s)</b>	<b>\$2,211,043</b>	<b>\$2,211,043</b>	<b>\$2,211,043</b>	<b>\$6,633,129</b>	-	<b>\$2,211,043</b>	<b>\$1,015,232</b>	<b>\$1,195,811</b>
<b>COSTS (Inflated Budget \$s)</b>	<b>\$2,255,264</b>	<b>\$2,300,369</b>	<b>\$2,346,377</b>	<b>\$6,902,010</b>	-	-	-	-
<b>ACTIVE SAVINGS*</b>	<b>0.36</b>	<b>0.36</b>	<b>0.36</b>	-	<b>1.08 mgd</b>	-	-	-
<b>TOTAL PROGRAM SAVINGS*</b>	<b>0.41</b>	<b>0.41</b>	<b>0.41</b>	-	<b>1.23 mgd</b>	-	-	-

\* Active Savings excludes savings from "freeriders," i.e., participants that would be expected to adopt a particular measure even in the absence of financial incentives. Total Program Savings, which include savings from freeriders, is used in calculating program savings as is done in the Saving Water Partnership Annual Reports.



## Option 4: Activity Levels, Costs, & Savings with Regional Baseline with Innovative Measures

	Number of Participants			3 Yr Cost in 2010 \$s	3 Year Savings	1 Yr Total	1 Yr Fixed	1 Yr Variable
	2011	2012	2013					
ShowerHead 1.5 gpm-MF	2,052	2,052	2,052	\$36,312	0.048	\$12,104	\$8,000	\$4,104
Toilets 1.28 gpf-MF	2,280	2,280	2,280	\$1,283,250	0.203	\$427,750	\$100,000	\$327,750
Bathroom Sink Aerators 1.0 gpm-MF	2,052	2,052	2,052	\$35,927	0.010	\$11,976	\$8,000	\$3,976
ShowerHead 1.5 gpm-SF	4,000	4,000	4,000	\$90,000	0.084	\$30,000	\$0	\$30,000
Toilets 1.28 gpf-SF	400	400	400	\$291,000	0.018	\$97,000	\$85,000	\$12,000
Bathroom Sink Aerators 1.0 gpm-SF	4,000	4,000	4,000	\$18,600	0.018	\$6,200	\$0	\$6,200
Clothes Washers-MF Common Area	80	80	80	\$107,217	0.012	\$35,739	\$14,939	\$20,800
Clothes Washers-MF in Unit	980	980	980	\$260,379	0.025	\$86,793	\$13,293	\$73,500
Clothes Washers-SF	4,540	4,540	4,540	\$1,216,500	0.134	\$405,500	\$65,000	\$340,500
Dishwashers-MF								
WaterSense New Construction-SF								
Efficient New Construction-MF								
ShowerHead 1.5 gpm-CII								
Gravity Toilets 1.28 gpf-CII								
Flushometer 1.6 gpf-CII								
Urinal 0.5 gpf-CII								
Public Faucet 0.5 gpm-CII								
Non-Public Aerator 1 gpm-CII								
Commercial/Industrial Non-Restroom	30	30	30	\$1,522,320	0.288	\$507,440	\$336,500	\$170,940
Irrigation New Construction-CII								
Irrigation - Retrofit-CII	20	20	20	\$612,000	0.028	\$204,000	\$104,000	\$100,000
Irrigation New Construction-SF								
Irrigation - Retrofit-SF	20	20	20	\$147,000	0.006	\$49,000	\$39,000	\$10,000
Irrigation-Rain Sensors-SF	400	400	400	\$216,000	0.046	\$72,000	\$52,000	\$20,000
Code-Clothes Washer 4.5-SF								
Code-Clothes Washer 4.5-MF								
Code-HET 1.28 gpf-SF								
Code-HET 1.28 gpf-MF								
Code-Showerhead 2 gpm-SF								
Code-Showerhead 2 gpm-MF								
Code-Aerator 1.5 gpm-SF								
Code-Aerator 1.5 gpm-MF								
Dishwashers-SF								
Commercial/Industrial Restroom-CII	21	21	21	\$694,624	0.047	\$231,541	\$189,500	\$42,041
Code Enhancement-O&M								
Voluntary Recognition	1,500	1,500	1,500	\$102,000	0.117	\$34,000	\$34,000	\$0
Rainwater Catchment	200	200	200	\$1,818,600	0.026	\$606,200	\$44,000	\$562,200
Living Building-Graywater	5	5	5	\$9,000,000	0.428	\$3,000,000	\$0	\$3,000,000
<b>COSTS (2010 \$s)</b>	<b>\$5,817,243</b>	<b>\$5,817,243</b>	<b>\$5,817,243</b>	<b>\$17,451,729</b>	-	<b>\$5,817,243</b>	<b>\$1,093,232</b>	<b>\$4,724,011</b>
<b>COSTS (Inflated Budget \$s)</b>	<b>\$5,933,588</b>	<b>\$6,052,260</b>	<b>\$6,173,305</b>	<b>\$18,159,153</b>	-	-	-	-
<b>ACTIVE SAVINGS*</b>	<b>0.51</b>	<b>0.51</b>	<b>0.51</b>	-	<b>1.54 mgd</b>	-	-	-
<b>TOTAL PROGRAM SAVINGS*</b>	<b>0.57</b>	<b>0.57</b>	<b>0.57</b>	-	<b>1.71 mgd</b>	-	-	-

\* Active Savings excludes savings from "freeriders," i.e., participants that would be expected to adopt a particular measure even in the absence of financial incentives. Total Program Savings, which include savings from freeriders, is used in calculating program savings as is done in the Saving Water Partnership Annual Reports.



## Selection Criteria for Regional Conservation Program Options

Evaluation Criteria	Definitions
Cost	Expressed as annual cost or cost per gallons or CCF saved over time, adjusted for the useful life of the water saving measure
Water Savings	Gallons or CCF saved over time
Equity across customer classes	Provides opportunities for all customers to participate whether they be residential, commercial, industrial, government or institutional
Preserve Capacity	Maintains a core program and experienced staff generating steady long term water savings so messaging and resources are available to respond to emergencies (curtailment)



## Selection Criteria for Regional Conservation Program Options cont.

Evaluation Criteria	Definitions
Geographic Equity	Balancing of conservation measures across the regional service area
Innovation and Leadership	Includes a few more expensive but promising measures – actions where regional leadership and advocacy is needed to make them happen (state and national water efficiency legislation)
Consistency and Predictability	Savings similar from year to year; participating utilities can plan for more consistent revenue, program intensity, and customer demand
Equity for Traditionally Underserved Populations	Criteria to be used by SPU as part of the Service Equity Initiative - optional for CTF (Added 7/10)



## **Program Measure Glossary**

### **Voluntary Recognition**

This captures water saved from staff involvement with creating water saving measures in various green building criteria. For example, Built Green, which was used for 1400 new homes in SPU's combined service area in 2009. In order to get a built green label, builders must install certain water saving fixtures that go beyond current building codes. LEED and Green Globes are two other program examples.

### **Showerheads 1.5 gpm Multi-Family**

Goes beyond current codes and offer free 1.5 gpm max showerheads to building owners, in partnership with energy utility programs. This measure is cost effective since energy utilities pick up most of the program cost, with water utilities only paying the incremental cost of the just the equipment itself.

### **Toilets WaterSense 1.28 gpf Multi-Family**

Rebates to owners of multi-family properties to install qualified high efficiency toilets as replacements. More flushes per toilet and repair of leaky toilets combine to produce more savings than single family toilet replacements.

### **Bathroom Aerators Multi-Family**

Replace bath sink aerators with 1.0 gpm. Good customer acceptance.

### **Bathroom Aerators Single Family**

Replace sink aerators with 1.0 gpm. High residential customer acceptance.

### **Toilets 1.28 Single Family Homes**

A rebate program for single family homes, one toilet per household. Only toilets meeting WaterSense 1.28 gpf specifications would qualify.

### **Clothes Washers Multi-Family in unit**

Rebates for owners of multi-family and condo properties that meet high efficiency qualifications as replacements or new construction.

### **Clothes Washers Single Family**

Rebates for single family customers, one per household that meets high efficiency qualifications as replacements or in new construction.

### **WaterSense New Construction**

This is a voluntary labeling program by EPA that certifies new residential properties are built to water efficient criteria. The average WaterSense labeled residence is at least 20% more water efficiency than a standard residence. Builders of qualified residences would get a rebate.

### **Commercial & Industrial Use, Non-Restroom**

Rebates for efficiency improvements in a variety of commercial and industrial water uses, such as cleaning, cooling, in-plant recycling, and manufacturing.

### **Commercial Industrial Restrooms Retrofits**

Rebates for toilets, sinks, urinals, and showers for commercial, industrial, and institutional customers.

### **Dishwashers Single Family**

Rebates for single family homes, replacement or new construction, that use qualified high efficiency dishwashers.

### **Dishwashers Multi-Family**

Rebates for owners of multi-family properties to install qualified high efficiency dishwashers as replacements or in new construction.

### **Clothes Washers Common Area**

Rebates for washers in common areas, usually with coin boxes, that provide for multiple users of a property when individual unit washers are not available.

### **Toilets Multi-Family**

Rebates to owners of multi-family properties to install qualified high efficiency toilets as replacements.

### **Landscape Irrigation Single Family**

Rebates to install high efficiency hardware, such as rotors or controllers, in new or existing irrigation systems.

### **Landscape Irrigation Commercial**

Rebates to install high efficiency hardware such as rotors or controllers in commercial and institutional properties.

### **Rain Shut-off Sensors**

Rebates to install sensors that over-ride and turn off irrigation systems during or after significant rainfall events. Helps avoid irrigating in the rain.

### **Living Building Graywater**

Rebates for buildings that treat graywater or wastewater and re-use it for non-potable purposes, limiting total building drinking water consumption to between zero and 10% of a normal building. These are called net zero water buildings, since they capture rainwater and reuse wastewater with the idea that little or no drinking water needs to be supplied to the building from public supplies, and little or no wastewater is discharged to the public sewer.

### **Rainwater Catchment**

Rebates for the harvesting of rainwater off of roofs for non-potable use in irrigation, toilet flushing, or other purposes as approved by local and state Health Depts. Commonly thought of as rain barrels, most applications require larger tanks and cisterns due to the larger water demands. Currently only rain water capture from roofs is allowed under Washington State water rights laws.

### **Code (selected measures)**

This is an intensive effort to enhance national, state, and local water use codes and standards to higher efficiency levels. By raising baseline efficiency levels, customers buying new or replacing old equipment would obtain greater long term water savings than if they replaced their equipment with equipment having a similar efficiency levels. Historically SPU has been active and successful in changing some mandatory codes. At a more intensive staffing level, confidence is increased that changes can be accomplished before year 2020.

### **Education and Behavior Change**

Advertising and messaging to customers on behavior modifications.



## Argument against the Pennies on the Rate Excuse for Conservation

While this is true in one sense, the specific line item of the SPU budget is only \$3 million, it is wrong because this one item causes the price of many other things to go up so the cumulative increase in cost to the rate payer is much greater, and it goes up every year that bonds are sold to pay for the project.

- 1) Pennies for the Conservation budget
- 2) Pennies for the reclaimed water budget because the cost of water is so high that RW is starting to look affordable.
- 3) Pennies for the large customers who leave town because of the higher rates
- 4) Pennies for the increased non-pays and their shut offs and their property liens
- 5) Pennies for the yearly COLA increases because we just pilfer the trained employees otherwise.
- 6) Not to mention the huge cost of money for the bonds to pay for the new treatment plants that increased the available firm yield in both reservoirs. (Even if that new water isn't on the permit.)
- 7) When did the budget for conservation go up 300%? It was \$1 mil a decade ago when it started.

As the canary in the coal mine of utility rate increase, I'm here to tell you I'm dying. I'm a housewife on a fixed income and when you take more pennies for some project that we don't need then you are taking it away from something I DO NEED.

Just keep that in mind when you decide to "do the right thing" that this project has to be balanced with the reality of the costs for your rate payers. Like me. What if there aren't any ratepayers in the future because they had to all leave town to find better paying jobs?

Thank you.  
Margaret Wiggins  
NUD Commissioner