

# WASHING MACHINE REBATE FINDINGS

We were able to study eight washing machine rebate programs from seven separate utilities. These rebate programs took place between 2001 and 2003.

All seven utilities studied were classified as small (less than 100,000 customers).

**Utility W-1** offered a rebate of \$300 and showed an actual increase in water use relative to control group water use. The participant group's water use was double the control group's water use before the rebates, however, so the "negative" water savings may be at least partially explained by the lack of a good control group.

**Utility W-2** offered \$125 vouchers and also showed slightly negative water savings.

**Utility W-3** offered a \$100 rebate, with the highest water savings of the seven utilities.

**Utility W-4** offered a \$75 rebate one year and a \$150 rebate the following year, with increased average water savings the second year.

**Utility W-5** offered a \$75 rebate, with minimal water savings.

**Utility W-6** offered a \$50 rebate and **Utility W-7** offered a \$125 credit on customers' water bills, both with substantial water savings.

The program offered by **Utility WR-1** was a replacement of several coin-operated washing machines. This program is not included in comparative analysis or charts because of the differences between this and the other washing machine rebate programs.

None of the washing machine rebate programs analyzed actively targeted high water users.

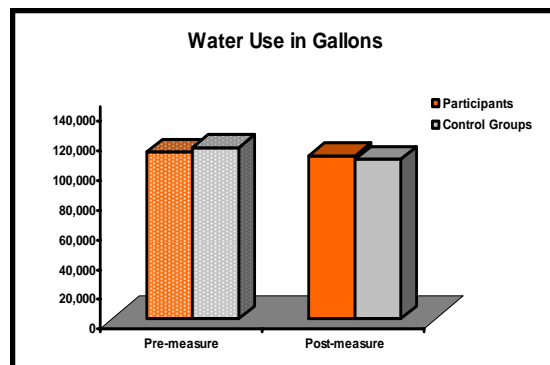
WASHING MACHINE REBATE PROGRAMS	
<b>Total Participants:</b>	<b>1,034</b>
<b>Participating Utilities:</b>	<b>7</b>
<b>Cases Analyzed:</b>	<b>8</b>
<b>Customers Analyzed:</b>	<b>SF</b>
<b>Years Analyzed:</b>	<b>2001 - 2003</b>

## WATER SAVINGS

*Some analyses show "negative" water savings, where control group water use decreased more (or increased less) than participant water use.*

### PRE- & POST-MEASURE RELATIVE WATER USE

There was a significant difference between water use among the participants of the washing machine rebate programs and the control groups. The overall water use range of the participants varied from 101% of the control group to 221% of the control group. The average of participants was 130% of control



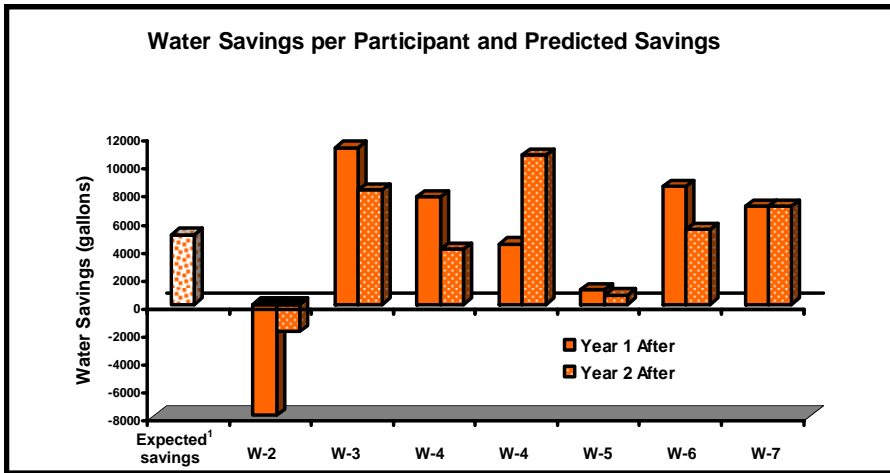
prior to receiving the rebates and 132% of control after receiving the rebates.

**RANGE, AVERAGE, MEDIAN SAVINGS**

Water savings per participant per year varied from 11,242 gallons to -103,987 gallons (a relative increase in water use).

Predicted savings for washing machine rebate programs are about 5,000 gallons per household per year.<sup>1</sup> We found an average water savings of -1,257 gallons per household per year (a relative increase in water use) including **Utility W-1** results, and an average savings of

3,176 gallons not including the results from **Utility W-1**.



OFF THE CHART: Utility W-1 is not included in this chart.

**PERSISTENCE OF SAVINGS**

The average water savings per participant for these programs was -915 gallons the first year after the programs and -1,600 gallons the second year after (relative increases in water use).

Without **Utility W-1**, these savings are 2,823 gallons and 3,529 gallons the first year and second year after the programs, which shows a 25% increase in water savings from the first year to the second year after.

**OVERALL LIFESPAN SAVINGS**

The water savings over the entire 12-year lifespan varied from -168.8 AF to 79.6 AF, with an average savings of -6.0 AF (a relative increase in water use) and a median savings of 14.1 AF. Not including **Utility W-1**, the range of water savings was -47.5 AF to 79.6 AF, with an average of 17.3 AF and a median of 19.7 AF.

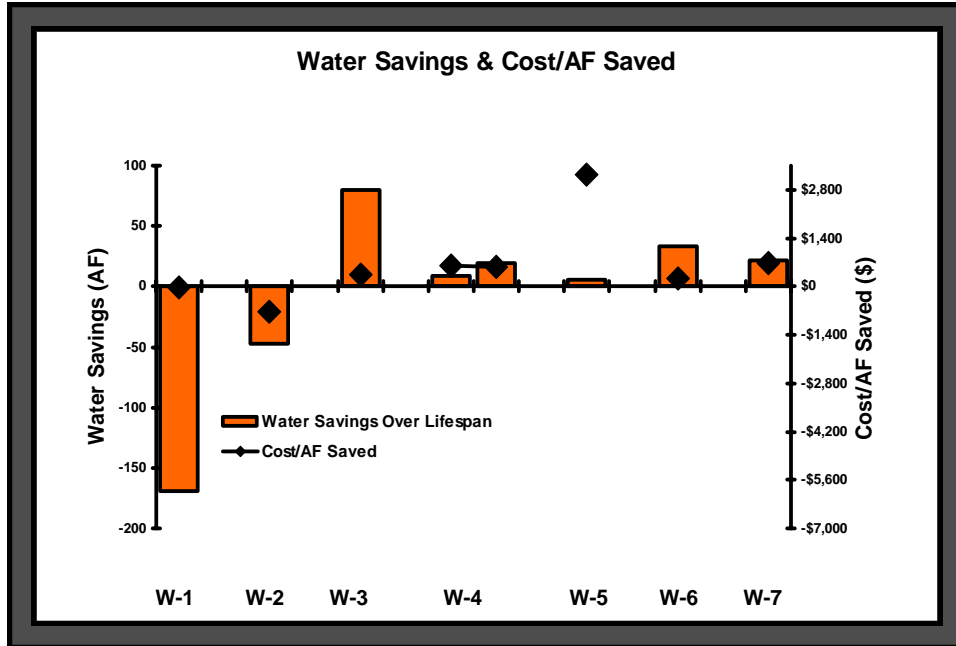
**ECONOMIC ANALYSIS**

**COST PER ACRE FOOT SAVED**

The cost to the utility to save an acre foot of water with washing machine rebate programs studied ranged from a high of \$2,519 to a low of -\$184. This negative cost to save an acre foot of water reflects “negative” water savings. The magnitude of negative costs per acre foot of water saved are meaningless, and could be thought of as infinitely high positive values. The average cost to save an acre foot of water was \$404 and the median cost was \$7.

Five of the eight programs examined had outside funding of their programs. When the costs to the utilities and these outside funders are aggregated, the average cost to save an acre foot of water increased to \$613 and the median cost increased to \$449 per acre foot.

<sup>1</sup> Vickers, Amy. Table 2.17: “Estimated water use and savings by high-efficiency clothes washers in households,” *Water Use and Conservation*, pg. 118.

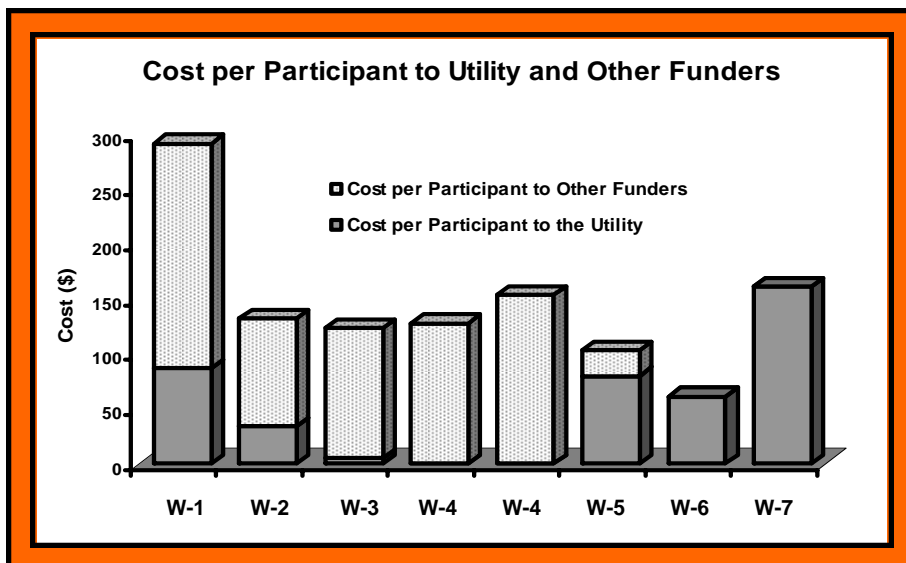


### COST TO UTILITY AND OTHERS PER PARTICIPANT

The cost to the utilities to administer the programs and distribute the rebates ranged from \$0 to \$161 per participant. The range jumps to \$61 to \$292 per participant when the cost to both the utilities and outside funders is considered.

The average cost to the utilities offering the rebates was \$54 per participant. Several of the utilities had outside funders to augment these programs and their costs averaged \$91 per participant. The total cost to the utilities and outside funders was \$144, on average.

The median cost per participant was \$48 to the utilities, \$109 to outside funders, with a median of \$130 of combined costs.



### **COST TO PARTICIPANTS**

The cost to the participants to buy the washing machines ranged from \$616 to \$630 per participant. The average cost to the participants was \$624 per participant. The median cost per participant was \$630.

### **NET PRESENT VALUE**

The Net Present Value to the utilities ranged from \$0 to **-\$13,869**, with an average of \$7,101. The Net Present Value to the participants ranged from **-\$24,563** to **-\$166,112**, with an average of **-\$89,825**. The overall Net Present Value ranged from **-\$38,221** to **-\$200,556**, with an average of **-\$108,697**.

#### **Thoughts on WASHING MACHINE REBATE Programs**

- ◆ **The potential for water savings is not huge for this type of incentive program: about 5,000 gallons per participant per year. It appears that the water use for many of those customers taking advantage of this incentive is so high that any water savings achieved with the new machine is lost within overall consumption.**
- ◆ **Are these programs requiring that the purchases be certified that they are the lowest water using models?**
- ◆ **Is this type of program just cherry picking customers who were going to get a new washing machine anyway and took advantage of the rebate?**
- ◆ **Would targeting neighborhoods, family size, etc. , where there might be a high percentage of old, highest water using machines still in use, be more cost effective?**