

TOILET REBATE FINDINGS

We studied six toilet rebate programs from five separate utilities. These rebate programs took place between 2001 and 2003.

Three of the five utilities studied were classified as small (less than 100,000 customers), and two were classified as medium (between 100,000 and 199,000 customers).

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

Utility TR-1 offered a rebate of \$150, or 75% of the cost of the toilet, whichever was less.

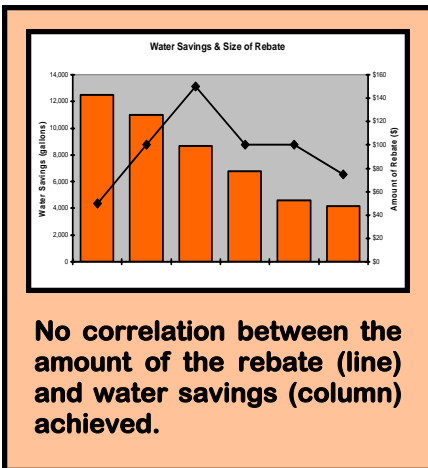
Utility TR-2 offered a rebate of 50%, up to \$100.

Utility TR-3 offered a \$50 rebate for the first toilet and a \$40 rebate for any additional toilets.

TOILET REBATE PROGRAMS	
Total Participants:	569
Participating Utilities:	5
Cases Analyzed:	6
Customers Analyzed:	SF
Years Analyzed:	2001 - 2003

Utility TR-4 offered a rebate of 50% of the cost of the toilet, up to \$75.

Utility TR-5 offered a \$100 credit on customers' water bills.

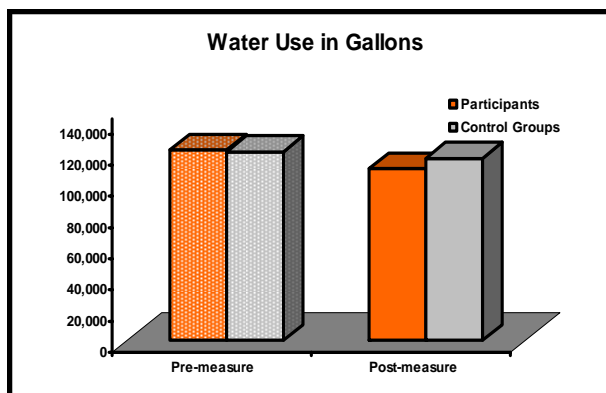


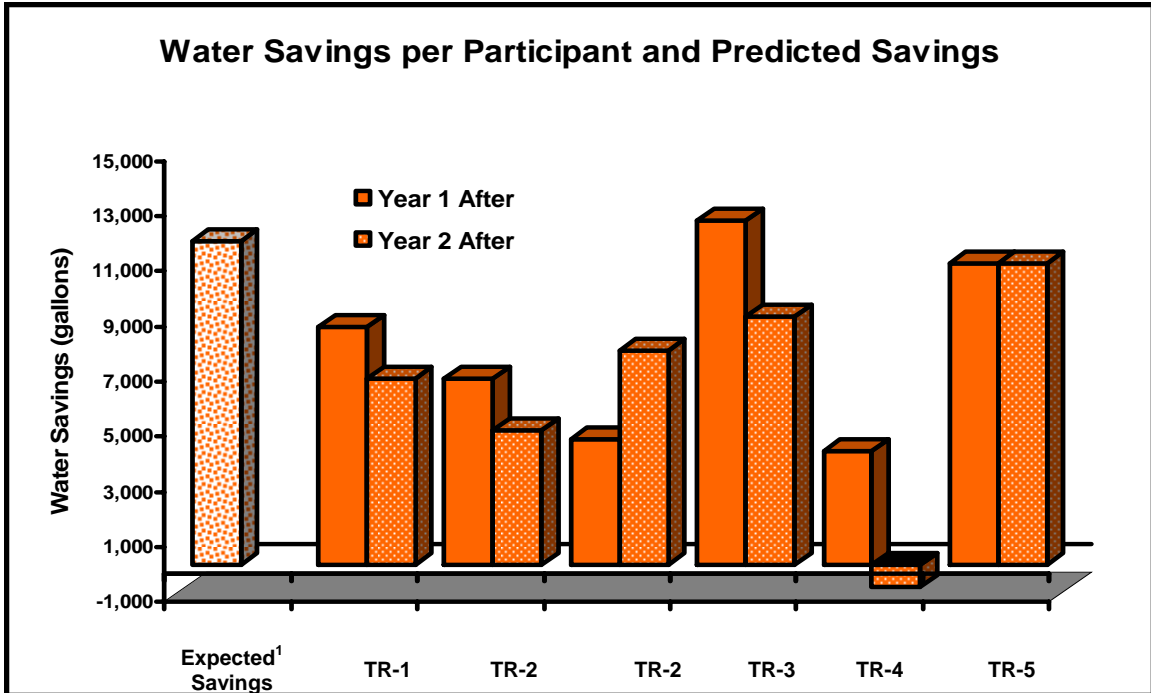
WATER SAVINGS

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 only a slight difference between water use among the participants of the toilet rebate programs and the control groups. The overall water use range of the participants varied from 84% up to 118% of the control group. Prior to acquiring the new toilets, participants used 104% of their control group, on average. The two years following the installation of the new toilet, these same customers used 96% of the control group, on average.





RANGE, AVERAGE, MEDIAN SAVINGS

Water savings per participant per year varied from 12,504 gallons to -760 gallons (a relative increase in water use).

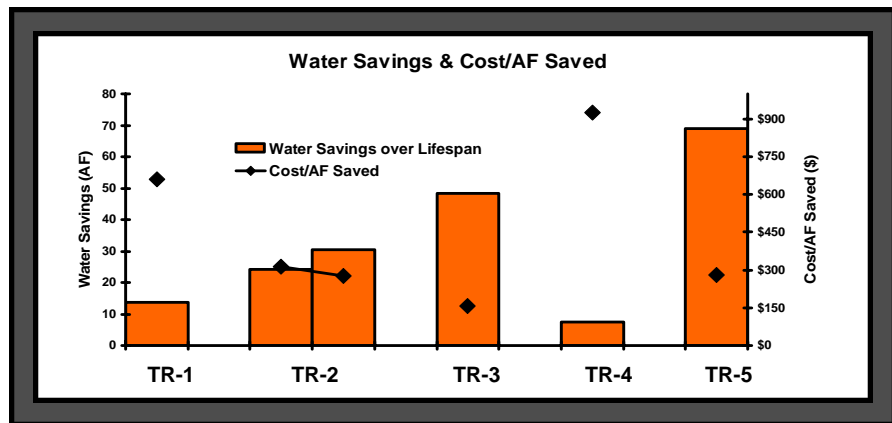
Predicted savings for toilet rebate programs are 11,794 gallons per household per year.¹ We found an average savings of 7,440 gallons per household per year, which was 63% of predicted savings.

PERSISTENCE OF SAVINGS

The average water savings per participant for these programs was 8,063 gallons the first year after the programs and 6,816 gallons the second year after, which shows a 15% decrease in water savings from the first year to the second year after.

OVERALL LIFESPAN SAVINGS

The water savings over the entire 20-year lifespan varied from 7.4 AF to 68.8 AF, with an average savings of 32.1 AF and a median savings of 27.2 AF.



¹ Vickers, Amy. Table 2.2: "Estimated water use and savings by low-volume toilets in households," *Water Use and Conservation*, pg. 25.

ECONOMIC ANALYSIS

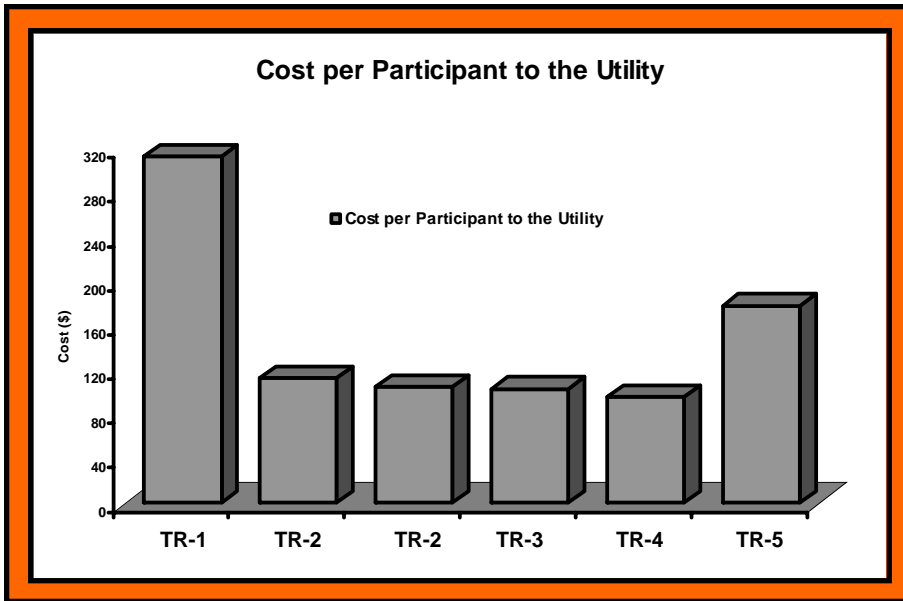
COST PER ACRE FOOT SAVED

The cost to the utility to save an acre foot of water with toilet rebate programs studied ranged from a high of \$926 to a low of \$155. The average cost to save an acre foot of water was \$436 and the median cost was \$297.

COST TO UTILITY AND OTHERS PER PARTICIPANT

The cost to the utilities to administer the programs and distribute the rebates ranged from \$96 to \$313 per participant.

The average cost to the utilities offering the rebates was \$151 per participant. The median cost per participant was \$109.



COST TO PARTICIPANTS

The cost to the participants to buy the toilets and have them installed ranged from \$193 to \$444 per participant. The average cost to the participants was \$270 per participant, and the median cost per participant was \$248.

NET PRESENT VALUE

The Net Present Value to the utilities ranged from **-\$6,822** to **-\$18,153**, with an average of **-\$9,596**. The Net Present Value to the participants ranged from **-\$8,414** to \$38,474, with an average of \$9,181. The overall Net Present Value ranged from **-\$15,236** to \$20,321, with an average of \$415 and a median of \$248.

Thoughts on TOILET REBATE Programs

- ◆ **These programs are abundant and have been around a long time. Utilities need to assess the savings still to be realized by these types of rebates relative to their service areas, especially age of housing stock. Targeting older neighborhoods or looking at a toilet distribution program instead might be a good idea.**
- ◆ **Savings with toilet rebate programs were not as high as expected. Perhaps those taking advantage of the rebate were changing out 3.5 or 5 gpf instead of the oldest 7 gpf toilets.**