
AWRA 2011 ANNUAL WATER RESOURCES CONFERENCE
Albuquerque, New Mexico

November 7-10, 2011

Copyright © 2011 AWRA

RESIDENTIAL WATER DEMAND AND THE IMPACT OF REBATE PROGRAMS

James Price*, Janie M. Chermak, Jeff Felardo

ABSTRACT: Residential rebate programs for low-flow water appliances have become increasingly popular as ways to reduce water use. Rebate programs can be found in most metropolitan areas in the western US, as well as in smaller municipalities. While the appliances included and the size of the rebate varies, these programs tend to be popular among customers. Despite the popularity, the question remains as to the success of the programs. Do low-flow toilet rebates result in more water savings than low-flow dishwasher rebates? Are the water savings due solely to the more efficient appliance, or do consumers' attitudes towards water change and do they become more (or less) conservation oriented? In this paper, we focus on these questions. Specifically, we consider residential water appliance rebates from the Albuquerque Bernalillo Water Utility Authority (ABCWUA). Employing monthly water use data and a database of rebate applications for residential customers from 1995 to 2008, we conduct an econometric analysis of the impact of various rebates. Controlling for price, weather, location, and census block characteristics, we estimate the marginal impact of a rebate on a customer's water use. Our initial findings indicate that the presence of a low-flow appliance reduces monthly household water use. Low-flow toilets have the greatest impact on water use, while low-flow dishwashers, washing machines, and hot water recirculators have smaller but still significant effects. In contrast, air conditioning systems have no significant impact on water use.

* PhD Candidate, Department of Economics, University of New Mexico, MSC 05 3060, 1 Albuquerque, NM 87131 USA, Phone: 1-505-277-5304, Fax: 1-505-277-9445, Email: jprice14@unm.edu