OBJECTIVES:
The objective of this research study was to evaluate the linkages and relationships between the water conservation behavior of residential customers and the communication approaches that seek to influence that behavior. The three primary research objectives were to (1) investigate through empirical research and literature review the relationships among the water conservation behaviors of customers, demographics and other factors, and effective communication that influence behavior; (2) establish communication guidelines that water agencies can use to design effective, integrated communication approaches aimed at influencing water conservation behavior; and (3) provide reference data and methods for evaluating the success of water conservation social marketing efforts.

BACKGROUND:
Water use patterns differ by region and customer, but the categories of end uses (toilet flushing, bathing, washing clothes, food preparation, landscape irrigation, etc.) are remarkably consistent across the country. Consequently, the conservation behaviors promoted by water utilities are often similar (e.g., replacing inefficient toilets, improving irrigation efficiency, and eliminating single-pass cooling). A key difference lies in the delivery channels and messages by which utilities promote water conservation. Utility sponsored water conservation campaigns leverage a variety of delivery channels, including bill stuffers, print and broadcast media, the Internet, and outdoor advertising such as billboards or transit advertising.

What are the impacts of water conservation communication campaigns in terms of customer recognition, attitudinal changes, behavior modification, and verifiable water use reductions? What are the most effective methods and techniques for designing and implementing water conservation social marketing campaigns? This research study seeks to answer these and other critical questions in an effort to help water providers improve the design and implementation of water conservation social marketing campaigns.

APPROACH:
An in-depth literature review was the first task of the workplan to be implemented. The research team next implemented the evaluation through a multi-method approach including telephone interviews with water agency personnel, surveys of residential water customers, analyses of current and past billing records supplied by water agency partners, in-depth case studies of water agencies and their water conservation communication
campaigns, and an evaluation of communication methods implemented by the six participating utilities. Data were collected from each of the six participating water agencies, including interviews with agency conservation staff; detailed information about water conservation communication, education, and marketing efforts including examples of materials; historic billing records from a systematic random sample of approximately 1,000 single-family detached residential accounts in each agency (6,051 in total); and survey response data from 1,890 households (35.3% response rate)

RESULTS/CONCLUSIONS:
The findings—both from the survey and the literature review—presented in this report highlight the linkages between communication approaches and water use behavior among residential customers. Listed below is a description of what we definitely know, as confirmed in the research report, and what we do not know.

What this study tells us and what we now know

- Most people believe that they regularly practice water efficiency measures.
- There is a high level of awareness about conservation practices and a concerted attempt to integrate conservation practices into everyday life.
- “Saving money” is the most frequently cited motivating factor for conservation behavior.
- Most frequently taken actions are repair (leaking plumbing), followed by increased purchasing of major appliances that use less water.
- The least practiced measures include water-wise landscaping and tracking usage with the water bill.
- Awareness of utility rebate programs is low, and the effectiveness of rebate programs seems muted, although the consumer desire for such programs is high.
- Almost 9 in 10 respondents say that they took at least one conservation step during the past year, and 1 in 3 believes they are doing all they can to conserve water.
- External pressure such as local government mandates coupled with fines or other means of enforcement reduce water use.
- Even when they have taken steps to reduce water consumption, residents with automatic sprinkler systems use significantly more water than those without.
- Residential water customers view those persons or organizations with a financial interest in either water equipment or plumbing or commerce as being less credible on matters of water conservation than those who do not have such an interest.
- Increase in the message “dosage” (frequency of being heard or read, different than frequency of being said or shown) is inversely proportional to water use: the more the dosage, the less the water use.
- A broad multi-modal communication approach to conservation messaging may be more effective in the long run than short sharply focused messages.
• Conservation is less a series of behaviors and more a lifestyle perspective: a “conservation ethic” if you will. Inducing or influencing behavior then will come from reinforcing a conservation way-of-living.

• Conservation messages that clearly articulate the end-goal (such as the 1% Program in Seattle) seem more effective in the long run than those that are general and vague.

What we do not know

• We do not know the effect (or the power) of any one message. However, it seems that persistent messaging (of almost any kind) having to do with water conservation will have an effect in the long run on attitudes and behavior.

• While a number of authorities in the field, and some of the utility partners, advocate directing the messages to specific market segments, we do not know which market segments are the ones that will work.

• We still do not know which media constitute the best channel for social marketing messages. Respondents to the survey said they prefer water bill inserts as the source for water conservation messages, but some of the literature points to other media (e.g., television) as being more effective. Media preferences and channels will be driven largely by the needs and barriers faced by the target audience.

• Because we cannot directly measure the effectiveness of any one message on water conservation behavior, we do not know which, of all the possible social marketing messages that can be constructed, would be the most effective ones.

• Almost un-tested is the power of “the norm” message for water conservation. Regardless of the social issue, people are strongly motivated by their perception of what most other people are doing. Unfortunately most utility programs lack good customer benchmarking to convey what the “average” customer is doing and the scale of improvement needed by “water hogs.” Instead, some utilities adopt regulatory approaches, to whip the slow members of the herd. This places them in the back of the herd instead of out in front of the herd, in more of a leadership role.

APPLICATIONS/RECOMMENDATIONS:
Below are some of the recommendations that the authors believe to be noteworthy with regard to planning conservation communication efforts.

• Focus on cost-effective water efficiency measures that are underutilized such as fixture replacement.

• Clothes washer rebate programs appear to be accelerating the adoption of water and energy efficient products. Target rebate messaging at customers with high indoor water demands and provide rebates only for the most efficient products.

• Many people believe they are conserving already, even if their water use suggests otherwise. Conservation communication efforts must effectively educate customers about what constitutes efficient use and where each customer’s demand fits on a spectrum of efficiency levels (e.g., highly efficient to not efficient).
• Mine customer water billing records to identify good candidates for water conservation program efforts.
• Use multiple communications channels to effectively deliver the right message to the right audience at the right time.

Findings in Relation to the 4P’s of Social Marketing

While it may be difficult to associate changes in water use to social marketing efforts, lessons learned from the research results can be used to guide water utilities in designing a social marketing campaign around the four principles (4P’s). The 4P’s are best used as part of an overarching social marketing process.

In this context the product is the programs and services offered by the utility to reach water conservation goals. The overarching water conservation message should address water supply and demand, which stood alone at the top as the biggest concern for consumers.

In the context of social marketing, price is the perceived costs of adopting the desired behavior. Educate consumers about the availability and financial advantages of utility rebate programs, since saving money is becoming a higher priority in households across the nation. In addition, education should focus on ease (low level of effort) related to adopting the behavior.

Place refers to the channels through which the products or programs are available, the places where the behavior change can occur (e.g., in the home), or when a service is received. Disseminate messages to consumers where they live, work, and play. Non-traditional venues should be considered, such as movie theaters, supermarkets, shopping malls, retail, and fast food outlets.

Promotion is how and where you communicate to your audience about the behavior, price, and place. The case studies in this report illustrate that a portfolio approach of mixed media can be effective in reaching consumers. A media mix can include advertising (print, broadcast, Web); direct mail (utility bill inserts); outdoor mass transit; or editorial outreach (article placement) to name a few. Use multiple communications channels to effectively disseminate information about water conservation to consumers.

RESEARCH PARTNER:
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PARTICIPANTS:
Seven utilities from the United States and Canada participated in this project.