

Introduction

Water conservation programs do not just protect water supplies and preserve the environment – they can also be used to reduce energy costs associated with heating, pumping, cooling, and treating. These energy savings translate to reductions in greenhouse gas emissions, which is a priority of the City of Schenectady, NY.

In 2008, the City conducted a greenhouse gas (GHG) emissions inventory, which determined that the water system accounts for 29 percent of the GHG emissions in the City, or 2,725 tonnes of carbon dioxide equivalent (CO₂e). Recognizing the large potential benefit of focusing on improvements to the water treatment plant, the Schenectady Energy Advisory Board recommended that the City "develop a strategy to conserve water in order to save energy, control infrastructure costs and preserve flexibility for future water supplies and needs." ¹

In 2013, the City revisited the idea of developing a water conservation strategy. Through New York State's Climate Smart Communities Program, Schenectady was offered technical assistance to develop a communications and marketing strategy for a water conservation campaign. The Climate Smart Communities (CSC) program is a New York State initiative to help local communities reduce GHG emissions, prepare for the effects of climate change, and save taxpayers money. The CSC program is designed to address 10 focus areas, or "pledge elements," outlined in the CSC Pledge. To support communities that have taken the Pledge, the New York State Energy Research and Development Authority (NYSERDA) offers technical assistance through the CSC Regional Coordinator Pilot Program, which, in the Capital Region, was awarded to the Capital District Regional Planning Commission (CDRPC).

Schenectady conducted an in-person technical assistance consultation with CDRPC and VHB ² on January 28, 2013 and requested technical assistance to develop a strategy for a water conservation education campaign. This strategy outlines the steps necessary to create and implement an education campaign for water conservation in the residential sector of Schenectady. This includes how to identify goals and target populations, establish a campaign brand and messages, develop key partnerships to deliver the messages, and how to measure success. By following these steps, Schenectady can begin to reduce GHG emissions from the water treatment plant and continue to uphold their climate protection commitment.

¹ Schenectady Energy Advisory Recommendations, "Carbon Emissions Analysis Briefing" by Dana Swalla, July 21, 2008.

² CDRPC contracted with VHB Engineering, Surveying, and Landscape Architecture, P.C. to provide support and technical assistance to Climate Smart Communities in the Capital Region.



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Step 1: Identify the goal of the campaign

The City has already identified a goal of reducing water use in order to save energy, control infrastructure costs, and preserve flexibility for future water supplies and needs based on the results of the City's 2008 GHG emissions inventory of government operations. According to the inventory, the water system accounts for 29 percent of total emissions from City operations, or 2,725 tonnes of CO₂e. Schenectady's water system serves 61,281 people in the city through 19,000 service connections. Of these service connections, approximately 1,500 are metered commercial accounts. Residential accounts are not metered − they are charged a flat rate based on fixture counts. A typical home in Schenectady will pay under \$250 per year for their water service.

The City can take the goal of reducing residential water use a step further by including a target, such as "reduce the water use in the residential sector by an estimated 10 percent." While residential water use and reductions are not measurable due to lack of meters, the City could incorporate a calculator into the



campaign that would allow residents to calculate the estimated gallons of water reduced through specific actions. A more specific target would also allow the City to understand the effectiveness of the campaign.

Step 2: Identify the target sector and population

The City indicated that initially, the water conservation education campaign should target the residential sector of Schenectady. During a conversation with Paul Lafond, the Director of the City's Water Department, it was determined that the best focus of this campaign would be on the residential sector. Mr. Lafond felt that because the commercial accounts are metered and have a financial incentive to conserve water, focusing on the residential sector would yield greater results. If the residential sector can reduce water use significantly, the reduced demand will reduce the operational and energy costs needed for the City to meet that demand. Mr. Lafond said that because of the lack of metering for residential customers, the argument for water conservation should be primarily an environmental one, since reduced water use will not directly reduce their water bill.

The campaign should strive to engage different populations such as adults and children. Children will be more likely to respond to fun ways to conserve water through games, while adults will be more responsive to calculators and challenges that show them the water and money they can save by taking specific actions.

Step 3: Establish the brand, messages, and logo

How you say something makes all the difference. Key messages are the core of a campaign – they communicate what you want your audience to hear and remember. Carefully crafted messages will give your communication direction and purpose and enhance the relationship with your target audience, supporting the overall brand.

There are three essential components of an effective campaign: Brand, messages and a logo.





A brand is the umbrella identity of a product or service, while the messages create the structure for that umbrella. A logo is the face of the brand, visually representing the message or messages that it is communicating. The City should determine how to establish a unique brand of the campaign while leveraging as many existing resources as possible, such as existing campaigns and projects that have been successful in the City. Crafting flexible messages to reach the target population and developing a logo to visually represent the brand are important. Typically, these elements make up a brand:

- Name, the title that identifies the City's campaign and concept
- Logo, is the visual representation of the brand
- Tagline, "Water is wealth"
- Images or graphics
- Colors
- Layouts
- Shapes

Messaging

One component of a successful brand is flexible messaging that will resonate with people motivated by different factors. While some may respond well to facts and figures about the pros and cons of water conservation, others may respond better to images of what they can do to make a difference. The water conservation message(s) can be crafted in a number of ways to try to reach different audience types.

Flexible water conservation messages can be developed to address different motivators for residents to take action. For example, in addition to financial benefits of water conservation (i.e., from reduced energy use, not water use), the City can create messages that focus on the health of the environment, what individuals can gain, and the risks to the environment of taking no action to conserve water. The City can combine messages of well-being and natural resource conservation (e.g., save water because it's good for the aquifer), and possibly competition, which has been shown to be a positive motivator in many campaigns. The following four types of motivators are a good starting place for the City to craft flexible, effective messages for their water conservation campaign:

1. Why water conservation is necessary for the community

Expressing the need for water conservation in Schenectady will likely resonate more with individuals who are motivated to take action because *it's the right thing to do*. Example message:

Water is integral to the well-being of humans, pets, the ecosystem, and economic activity.



The City may use a combination of taglines and facts as part of its messaging. Denver Water uses a tagline, "Use Only What You Need," to remind residents of the importance of water conservation on a day-to-day basis, because the City is in a water scarce area of the country. This message will resonate with members of the community that understand the value of sufficiency and a concern for the well-being of the community and local environment as a whole.

Schenectady could consider this example in creating its own message like "Save Water, Keep the Great Flat Aquifer Healthy" to convey the necessity of water conservation for the overall benefit of Schenectady and the aquifer.

2. Individual benefits of water conservation

Expressing the benefits of water conservation will likely resonate more with individuals who are motivated to take action once they understand how they can benefit from water conservation. An example of how to express the benefits of water conservation might include: "Conserving water saves households money through reduced energy use required to heat and pump water."

The City can use taglines to convey the connection between water conservation and a benefit, such as "Drops to Watts: Save Water, Save Energy." ³ The City can express the connection between water and financial savings through an image like this one:



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3. The risks or consequences of not conserving water

Messages that communicate the risks or consequences of not conserving water can be developed for individuals who are motivated to take action once they understand what is at stake if no action is taken. A local government can communicate this risk or consequence by talking about something that is close to people: recreation. By connecting the need for water conservation to potential seasonal loss of recreational areas like lakes and rivers, the issue becomes something that personally affects residents who use our water bodies for boating, swimming, and fishing.

⁴ Clallam County, Washington. "Water is Wealth: It's time to save" image (accessed 5/31/2013): http://www.clallam.net/waterconservation/pig_final_blue_05-7-09little.jpg



The City could juxtapose images of the region's water supplies with what they would look like with no recreational activity due to low water levels.

Figure 1: Water supply levels – before and after drought conditions in Ardingly Reservoir



4. What can be done to achieve water conservation goals

Expressing what can be done to achieve water conservation goals will likely resonate more with individuals who are motivated to take action once they understand how their own specific actions can make a difference. Examples of actions that residents can take to reduce water use are provided in Figure 2. The City may use these tips, and others, to show residents *how* they can reduce water use. For example, the Citizens Campaign for the Environment in New York State created a "water conservation at home" tip sheet that has the following message:

Fix Faucet Leaks - - Don't Let All That Clean Water Drip Away.⁶

⁵ Pictures accessed 56/4/2013:

http://i1.mirror.co.uk/incoming/article829295.ece/ALTERNATES/s615/What+drought+-+Ardingly+Reservoir

⁶ Citizens Campaign for the Environment: http://www.citizenscampaign.org/special features/water-conservation/home.asp



Figure 2: Residential sector water saving tips

There are a range of water-saving actions the City can recommend to residents, including¹:

Indoor

- Fix leaky pipes and products
- Reduce shower time
- Eliminate unnecessary water use when brushing teeth or washing dishes
- Wash clothes and dishes only when loads are full

Outdoor (landscaping and irrigation)

- Group plants according to their water needs
- Know how much water each plant needs to stay healthy
- Fix leaky hoses and equipment
- Aerate the soil
- Raise the lawn mower cutting height

Product Selection

• Buy products branded with the WaterSense label (i.e., toilets, bathroom sink faucets, showerheads, weather-based irrigation controllers)¹

Additional resources:

- Indoor water saving tips: http://www.epa.gov/watersense/our-water/start-saving.html
- Landscaping tips: http://www.epa.gov/watersense/outdoor/landscaping tips.html
- Watering wisely: http://www.epa.gov/watersense/outdoor/watering_tips.html
- Water-saving technologies: http://www.epa.gov/watersense/outdoor/tech.html

Developing a logo and using images for the campaign

After the messages are defined, it is time to create a logo for the campaign. The City can create one from scratch or adopt an existing logo (e.g., if the City chooses to adopt the WasterSense program, they could use the WaterSense Partner logo). A logo is the primary visual representation of the campaign, and the layout, colors, font, and shapes are all important components of the logo and overall branding. Figures 3 and 4 presents logos and images that have been used in other water conservation programs:



Figure 3: Example water conservation logos

Figure 3: Example water conservation logos			
Program	Logo		
U.S. EPA's WaterSense	Water Sense		
Chicago Conservation Corps	Chicago Conservation Corps		
Prince George Water Conservation Program	City of Prince George Water Conservation Program		
Village of Villa Park	A STATE OF THE STA		

In addition to creating a logo, clever taglines and images can communicate the message(s) in a campaign. Denver Water's "Use Only What You Need" Campaign, created a variety of fun images that can be placed and recognized anywhere because of their simplicity and consistency to the overall brand of the campaign. Figure 4 provides a snapshot of some of the locations Denver has placed these images.

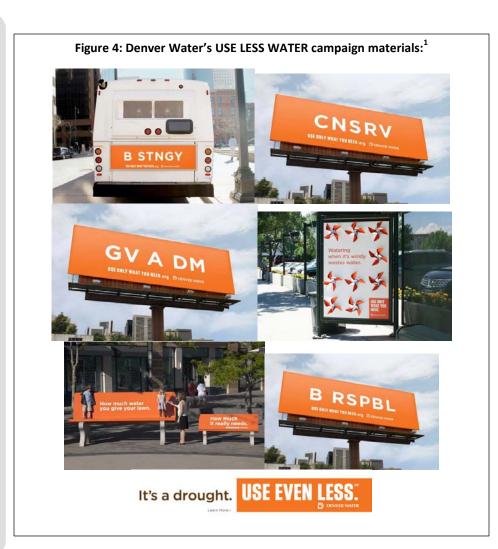


Denver Water's "Use Only What You Need" Campaign

Denver Water's water conservation campaign was designed to address day-to-day water conservation as well as water conservation during times of drought or crisis. The logo identifies the provider (Denver Water), the product (water), and the message (reduce water use).

This campaign is powerful because it:

- Is playful
- Uses messages that will resonate with the range of individual priorities (e.g., the bigger picture, financial savings, reduced risk)
- Uses images to make individuals think about how much water they really need vs. what they use
- The consistent layout, orange background, white and black text, and bold print make all campaign materials clearly from Denver Water and about water conservation
- The advertisements are delivered in different modes: on buses, in print, in installations, on bus stops, on billboards capturing the attention of both drivers and those who take mass transit





The City can benefit from participating in a well-branded, existing water conservation program that has the following components:

- Flexible it can be modified without losing the campaign integrity to fit changing needs and can be delivered in a variety of ways to appeal to several audiences
- Simple and easy to interpret not complicated in design or appearance
- Consistent messages are consistent with one another and feel connected to the overall intent of the campaign
- Easy to identify when someone hears the tagline or message or sees the logo or a billboard, they will know it is connected to the campaign

If the City chooses to create its own campaign, a marketing staff person could help develop the brand and logo or the City could kick off its campaign with a logo competition. The City can also engage local college students to develop a creative brand for the campaign, including a logo and tagline.

Step 4: Identify communication methods

It is important to use a combination of methods to communicate the campaign because it increases the opportunities that messages will reach the intended audience(s). The Water Department should identify existing communication methods within the department and the City in general to determine if there are successful approaches that the campaign can utilize. Connecting existing outreach techniques will save time and resources and enhance the success of the water conservation campaign.

There are a variety of communication techniques that City can, and may already, use to promote the campaign. Figure 5 summarizes a variety of methods including direct mailings, the City's website and utility bills. Tracking how the community responds to various methods will also be important to modify the City's campaign strategy moving forward (see Step 7).



Figure 5: Communication methods for water conservation campaign

Communication Method	Examples
Direct mailings	 Leverage existing direct mailings to residential households by including water conservation tips to residential customers Include seasonal water conservation tips (See Figure 2) Ask school administrators to send home water conservation tips with students
City's website	 Create a new webpage about water conservation in Schenectady Add a banner to the City's homepage and Water Department webpage with rotating water conservation tips
Social media	Social media can be used for original or shared posts, how-to guides, tip sheets, and announcements about water conservation on platforms such as Facebook and Twitter. Examples of governmental social media accounts include: The Town of Niskayuna, NY, Facebook account: https://www.facebook.com/pages/Town-of-Niskayuna/194937053981034 The City of Thornton, CO, Water Conservation Facebook page: https://www.facebook.com/thorntonwater The Massachusetts Water Resource Authority's (MWRA) Facebook page: https://www.facebook.com/pages/Massachusetts-Water-Resources-Authority/107612272595207?nr The East Glenville Fire Department official Facebook account: https://www.facebook.com/pages/East-Glenville-Fire-Department/214222846367 The City of Schenectady Police Department official Twitter account: https://twitter.com/schdypolice
Annual reports	Include water conservation messages in reports such as the Annual Drinking Water Quality Report, and in other reports like the State of the City
Utility bills	 Include new tips, facts, etc. on monthly water bills Collaborate with the local energy provider, National Grid, to collaborate on water and energy conservation messaging (i.e., save energy by reducing water use)
Events	 Deliver water conservation presentations at strategic partners' events such as community meetings and workshops, and incorporate the four key messages addressed in Step 3 of this document Have water conservation booths at events such as Greenmarket⁷

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Figure 5: Communication methods for water conservation campaign, continued

Communication Methods	Examples
Create a water conservation series	 Create an op-ed series. "State of the Water" is an op-ed piece where the City reports on the state of the water system, interesting facts about the aquifer, and water conservation tips And/or invite residents to submit Op-eds with what they are doing to conserve water See the Twelve Months of Water campaign as an example of residents submitting testimonials about water conservation: http://www.chicagolandh2o.org/
Media	 Place advertisements in the local newspapers as well as cable and radio stations Due to the cost of advertising, the City may consolidate advertisements to a specific timeframe for the biggest impact (e.g., during Earth Week)
Brief elected officials about water conservation in water conservation	In one-on-one or small group meetings, educate and encourage elected officials to help spread the water conservation message(s) ⁸ to their constituents

Step 5: Work with key stakeholders and strategic partners

The City should work with local partners to build and deliver a successful water conservation campaign. Local environmental groups, schools and higher education institutions, media outlets, and others can provide a wealth of knowledge, resources, and implementation capacity to assist the City in creating a successful campaign. Strategic partners may include:

- City Departments: Mayor's Office, IT Department, Planning Department, Public Relations (if separate from Mayor's Office)
- Neighborhood
 Associations: http://www.cityofschenectady.com/neighborhood associations.htm
- Local environmental organizations
- Civic and faith-based organizations
- The local plumbers union, US Local 7
- Local news outlets such as the Daily Gazette, WRGB CBS6, NEWS10 ABC, WNYT/Channel 13, and YNN



• Educational institutions

- o Student groups such as INTERACT and the Outing Club, both high school student groups⁹
- Schenectady schools can use existing guides such as EPA's WaterSense to create lesson plans for Social Studies, English, Math, and Science classes that focus on water conservation.
- Institutions of higher education such as Union College and Schenectady County Community College

Elected Officials

 Educate and ask elected officials to talk about the value of water and water conservation in verbal and written communications

Step 6: Leverage existing programs and resources

Great news! The City doesn't have to start from scratch in developing messages, tips, marketing materials, and challenges to motivate residents to take action. There are many successful programs that have already developed these tools and resources and the City should review options and use the programs and materials that it feels will resonate with Schenectady residents.

The following examples are successful, comprehensive programs that the City can reference as the water conservation campaign is being developed.

WaterSense

WaterSense is a well-branded and highly successful water conservation program administered by the U.S. Environmental Protection Agency. The program was established in 2006 and has estimated that, in its seven years, has saved 287 billion gallons of water and near \$5 billion in water and energy bills. The program has extensive resources on water conservation practices and is the entity behind the WaterSense label for water-efficient products, including fixtures and appliances.



⁹ Schenectady City Schools, Schenectady High School 2010-2011 Clubs and Activities (accessed 5/28/3013): http://www.schenectady.k12.ny.us/Schenectady High School/Clubs and Activities.pdf. Also, see how the City of Chicago partnered with a local anchor institution to engage students in a program focusing on conservation (accessed 5/28/2013): http://chicagoconservationcorps.org/blog/studentclubs/

¹⁰ EPA WaterSense "Fix a Leak Week" Teacher's Guide (accessed 6/4/2013): http://www.epa.gov/watersense/docs/fix a leak week2013 teachers guide.pdf



Benefits of the program are that it is nationally recognized, program materials address the different motivators for water conservation (e.g., financial savings, risk avoidance) and it provides resources and tools about water conservation (e.g., water conservation tips per season, water saving calculator).

40 Gallon Challenge

The 40 Gallon Challenge is a national program that started in 2011. It is a voluntary pledge that individuals or organizations can take to reduce water use through any number of water conservation actions. The Challenge provides a framework that the City could easily tap into by simply promoting the pledge to residents and tracking participation on a county-wide level. This model will resonate well with individuals motivated by understanding what actions they can take to reduce water use. The following is a snapshot of the pledge page that is specific for the state of New York.



Benefits of the Challenge are that it is web-based, has traction nationwide so that participants can see how their individual impact plays a role in the larger national effort to conserve water, and the program has a number of marketing materials and resources that can be used, including public service announcements and social media interfaces. More information about the 40 Gallon Challenge is available, here: http://www.40gallonchallenge.org/about.cfm



Step 7: Obtain feedback and report on progress

Soliciting feedback and tracking progress will be essential for determining the success of this campaign. In addition, it will be helpful for making adjustments for future iterations of the City's water conservation efforts. The metrics the City can use will depend on the program design. For example, if the City creates or uses a program like the 40 Gallon Challenge, the City can ask residents to submit their estimated water savings. The City can then calculate the estimated water savings annually to track progress. Example performance metrics include:

- Reduction of water use per capita
- Number or percent of residential households participating in a program
- Estimated gallons of water and/or electricity saved (if calculated estimated water savings through programs like the 40 Gallon Challenge or WaterSense)

Depending on staff capacity and resources, the City may obtain feedback from residents through the web, email, or snail mail. The City may also benefit from conducting formal marketing research in the future with the help of a third party such as a university or local non-profit. However the results are collected, the feedback the City receives will confirm if the City's campaign is effective or provide helpful insight into how it can be modified.

Summary and next steps

There are several key steps for the City of Schenectady to develop and implement a water conservation education campaign. With the assistance of municipal staff, which will be integral to creating and implementing a successful program, the City can take these steps to create a water conservation campaign:

- 1: Identify the goal of the campaign
- 2: Identify the target sector and population
- 3: Establish the brand, messages, and logo
- 4: Identify communications methods
- 5: Work with key stakeholders and strategic partners
- 6: Leverage existing programs and resources
- 7: Obtain feedback, and report on progress

The City's has taken an important step by identifying the need to develop a water conservation education campaign. Simple, flexible messages delivered through a variety of methods and developed



through collaborative partnerships will help to ensure that campaign successfully achieves the City's water conservation goals.

Additional water conservation resources

- American Water Works Association Sample Utility Communications
 Plan: http://www.awwa.org/resources-tools/public-affairs/communications-tools/public-communications-toolkit/sample-utility-communications-plan.aspx
- Denver Water's Water Conservation resources:
 - Denver Water's monthly water conservation
 tips: http://www.denverwater.org/Conservation/TipsTools/SeasonalTips/
- 40 Gallon Challenge website: http://www.40gallonchallenge.org/
- National Mayor's Challenge for Water
 Conservation: http://www.wylandfoundation.org/mywaterpledge/
- WaterSense website: http://www.epa.gov/watersense/about_us/index.html
 - "Fix a Leak" Week Teacher's
 Guide: http://www.epa.gov/watersense/docs/fix a leak week2013 teachers guide.pd