

CASE STUDY: CARY, NORTH CAROLINA

Program Name: Town of Cary Water Conservation Program

Agency Name: Town of Cary Department of Public Works and Utilities

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Number of Customers: 35,000 (100,000 population)

Program Description:

Cary, North Carolina is an affluent suburb just west of Raleigh. Cary's population has more than doubled over the past ten years from 43,858 in 1990 to 96,217 in 2000, placing a significant strain on the town's water resources. In addition to conserving water by reducing summer peak day demand, the Town of Cary's water conservation program focuses on reducing per capita water consumption by 20 percent by the year 2020. Staff uses a multi-faceted management approach with voluntary, incentive, and regulatory mechanisms to address both supply-side and demand-side conservation.

Program Beginning: 1996

Target Audience:

Program measures are directed at Cary's two primary customer types: residential (75%) and commercial (25%). Number reached per year: Direct interactions: 300 elementary students, 5,000 adults through the Block Leader program and public festivals, and 32,000 customers through direct mail.

Program Cost and Funding:

The Water Conservation program budget includes \$185,00 for salaries (3.75 FTE regular; 2.5 FTE temps); and \$16,500 for supplies. The funding source is the utilities fund.

Budget/employee time and tasks breakdown is as follows:

- Water Conservation Coordinator: overall program management: development/implementation/evaluation. 1.0 FTE @ Grade 24 (\$36,524.80 - \$52,956.80)
- Reclaimed Water Coordinator: coordinates reclaimed water program development and implementation. 1.0 FTE @ Grade 23 (\$34,777.60 - \$50,419.20)

- Water Conservation Assistant: coordinates public education and assists with program development. .75 FTE @ Grade 20 (\$30,035.20 - \$43,555.20)
- Water Budget Technician: manages tiered rate structure and customer water budgets, and analysis of program components: (1.0 FTE @ \$27,268.80 - \$39,540.80)
- Water Conservation Technician: coordinates enforcement and education initiatives regarding irrigation ordinances (1.0 FTE @ \$27,268.80 - \$39,540.80)
- Field Technicians: conduct field enforcement of watering ordinances. 5 temporary technicians are hired during the summer months @ \$8 - \$10/hr.

Supplies budget breakdown (\$16,500 total):

- \$3,000 – paper for brochures (printed in-house)
- \$5,000 – promotional items
- \$5,000 – retrofit devices
- \$3,000 – Drinking Water Week
- \$500 – irrigation supplies

Program Objective/Driving Force:

The program is designed to reduce per-capita water use 20 percent by the year 2020. As a result, the next two future treatment facility expansions will be delayed over 10 years, and defer millions in capital expenditures.

Program Type:

The Water Conservation Plan strongly emphasizes the necessity of a continuous and effective public information and education program used in both the community and the classroom. During spring and summer months, educational materials and announcements target outdoor water use. During fall and winter months, the program’s educational focus shifts to indoor water use. Descriptions of several of the Town’s fundamental education efforts follow.

Beat the Peak. Due to especially high demand during summer months, Town water conservation staff work with the Town’s Public Information Officer each year to develop new themes for the comprehensive summer campaign known as “Beat the Peak”. The goals of the campaign include decreasing peak water demand, shifting peak usage times to early morning, and reducing overall water consumption. The 1998 “Beat the Peak” campaign, nicknamed the “Tuna Can Plan,” used “tuna cans” as a tool to demonstrate the concept of irrigating 1”(2.5 cm) a week. Town sanitation crews distributed 25,000 packets containing a steel can and brochure to residents. “Beat the Peak” uses conventional and innovative information vehicles such as television/print/radio advertising, the town’s website, local media interviews, direct mail, cable television public service announcements, pizza toppers, fast-food restaurant tray toppers, and presentations to area clubs and civic organizations. “Beat the Peak” put the issue of water conservation in the forefront of the community. The 1998 campaign also received an EPA Region IV Award for Most Innovative and Effective Educational Program.

Block Leader Program. Initiated in 1998 as part of “Beat the Peak,” the Block Leader Program expands the original grassroots outreach program employed by many communities in the late 1980s, including Cary, to introduce citizens to curbside recycling. Cary revived the program and made water conservation its primary focus. Each spring and early summer, new and established Block Leaders attend a training session to become familiar with the town's summer water conservation campaign, learn the status of utility projects and how they impact the supply and demand of water, and pick up materials for distribution to neighbors within their block. To further educate themselves, these volunteers attend optional workshops on topics such as the water treatment process, the wastewater treatment process, landscaping with drought-tolerant plants, and fixing leaking toilets. Block Leaders are a network of residents dedicated to environmental education, and have no enforcement responsibilities. Since the program began in 1998, the percentage of customers covered by the program has grown to 19 percent.

Elementary Programming. In addition to the Block Leader Program, town staff regularly interact with elementary school students. During the school year, second graders play a game, Save Lots of Water (SLOW) to learn important water conservation habits, and how individual efforts make a big difference collectively. Staff developed SLOW in-house as an extremely cost-effective way to take the water conservation message directly into homes. Over the course of a week, students perform water-saving activities, such as turning off the faucet while brushing their teeth, and record how much water they saved according to a provided chart. The class calculates the amount of water saved each day and tracks savings on a picture of a large water drop calibrated to 1,000 gallons. Every class that “saves” 1,000 gallons, i.e. fills in the entire water drop, wins an ice cream party. In 1999, 23 classes played SLOW, and 20 of them “filled” the water drop. During the 2000-2001 school year second graders will again play SLOW. As an addition to the Town of Cary’s elementary programming, fifth graders will engage in a water conservation Internet scavenger hunt.

Workshops. Another town education measure targets adults interested in landscaping and gardening. Town staff and Master Gardeners offer workshops throughout the year on water-efficient landscaping and irrigation techniques. Classes include sprinkler scheduling and maintenance, installation of rain sensors, soil management techniques, water-efficient landscape design, use of drought-tolerant plant material such as warm-season grasses, and wise water use in the landscape. In addition, staff works regularly with the Carolinas Irrigation Association to promote and sponsor irrigation workshops for the local irrigation industry.

Printed Material. The town produces three brochures to inform citizens about water, the water conservation program, and irrigation-related ordinances. *Let’s Be Water Conscious!* primarily lists indoor and outdoor water conservation tips; *Avoiding Water Waste* details the Waste While Watering Ordinance and gives suggestions on how to avoid water runoff; and *Why Install a Rain Sensor* describes the Rain Sensor

Ordinance and answers common questions regarding rain sensors. The Town mails these brochures directly to homeowners, and also communicates this information through weekly tips in the municipal section of the local newspaper and in the monthly utility bill insert. Display ads in the local and regional papers also keep residents informed. Additionally, the town distributes to nurseries, hardware stores, and other businesses a series of informational flyers entitled *Landscape Cary Style*. These flyers describe water-wise landscaping techniques, soil preparation, warm-season grasses, irrigation tools, and drought-tolerant plants.

What Works Best:

Over the past five years, most citizens have come to recognize the importance of conservation through the town's extensive use of media to maintain high visibility (especially during the summer).

What Would Change:

The regular support of a citizen's advisory council would allow valuable input. The town also did not complete a Water Conservation Plan until several years into the process (not enough time at the beginning).

Evaluation of Effectiveness:

Although relatively new, Cary's water conservation program is achieving results. Despite the town's annual growth rate of five percent the past two years, the volume of water sold has remained the same. Staff are closely examining the program components in an attempt to discover exactly which programs are reducing water use. Conservation efforts will reduce operating costs and defer considerable capital expenditures.