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Water Resource Management

Ideas For Community Officials

Success Stories:

Kokomo Rate Increase Passes With Flying Colors

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Wellesley Increases Revenues While Cutting Peak Water Consumption

In Philadelphia, Pennsylvania, Hydrants Are for Fires, Not for Fun

Community-Wide Conservation Takes Hold in Palo Alto, California

Contemplating how to gain support for a wastewater rate increase? Kokomo, Indiana, has the key. Struggling with the need to reduce water consumption while increasing revenues? Wellesley, Massachusetts, understands. No doubt, you are faced with these and many other water and wastewater management challenges. You are not alone. Water utilities throughout the country are grappling with the same issues. The common problem: more service demands with less resources.

A successful solution? Public education. A straightforward, effective way to solve your water resource management problems. Douglasville-Douglas County, Georgia, is convinced that communicating with the public is as necessary as reading water meters. The county's community relations success arises from ingenuity and a shoestring budget. Fortunately, these successes are yours for the taking. Inside, five utilities tell us how they use public education to solve a variety of water resource management problems, from illegal fire hydrant openings in Philadelphia, Pennsylvania, to drought imposed water restrictions in Palo Alto, California. The U.S. Environmental Protection Agency invites you to follow their lead. It works!

Riding the Wave of Public Education

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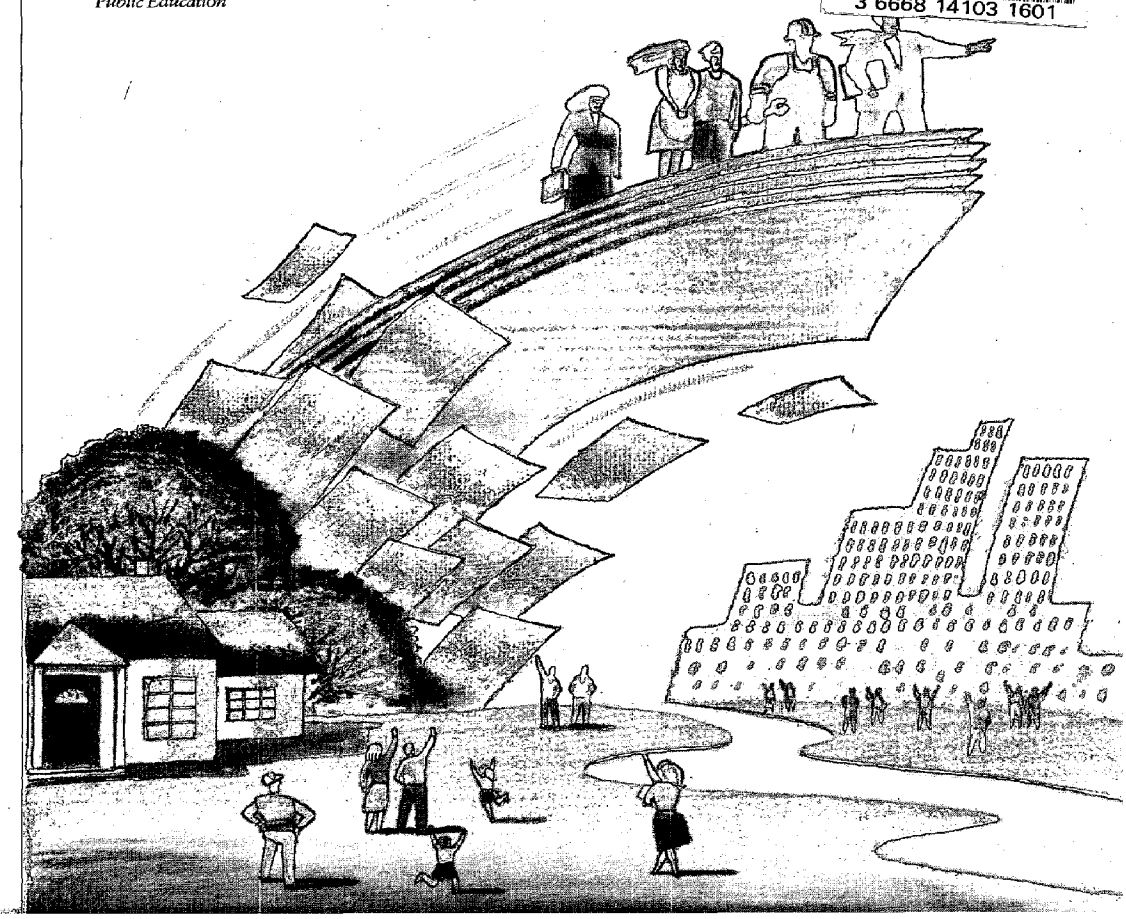

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Wellesley Increases Revenues While Cutting Peak Water Consumption

Wellesley, Massachusetts
Department of Public Works Water Conservation Program

Community Profile:
Metropolitan area community 17 miles west of Boston

Target Audience:
8,000 residential customers

Program Goals:
Reduce water demand, particularly during the summer months, and increase revenues

Results:
Reduced the number of days demand exceeded supply by 90% (from 7-10 days to 1 day), lowered overall per capita consumption, and increased revenues through peak demand rate structure

Wellesley is a small New England town that met its own water needs for over 100 years. Then Wellesley encountered two major problems: excessive demand for water and lack of revenues. For about seven to ten days every summer from 1970- 1981, demand for water had exceeded available supply by up to 1.6 million gallons of water a day. To make matters worse, water revenues did not cover the full cost of providing water service to the community. In 1981, the department's expenditures exceeded revenues by $182,000. The town faced an interesting challenge: reducing water use while increasing revenues.

The department created a very successful conservation program that relies on community participation. Through a combination of public education and financial incentives, the program has helped the community dramatically reduce its water consumption. As a result, the town has reduced its peak water demand to only one day each summer, a 90% reduction over previous demand. The program has also lowered the cost of providing water to the community by reducing overall per capita demand.

Wellesley's program discourages excessive summertime water use by charging customers more for water during the summer months. This peak demand rate covers the actual cost of providing water to customers and sends a strong signal to the community about the value of water and the need to conserve.

Wellesley reinforces this message by delivering public education materials to its customers through meter readers and water bill inserts. The materials, which include pamphlets, door hangers, and brochures, encourage voluntary water-saving techniques, such as alternating lawn watering days between odd- and even-numbered homes and installing water-saving plumbing devices in households.

Wellesley extends its conservation message to elementary school children by including water education in the curriculum of every school in town. A department representative visits all of Wellesley's fourth grade classrooms and teaches students how to conserve water at home.

To reduce water loss and ensure that community water savings are accurately tracked, the program includes leak detection and the identification of faulty water meters. Faulty meters are replaced immediately upon discovery. Wellesley keeps program costs relatively low by using in-house resources. The Department's assistant director and a paid summer intern from a nearby college initially implemented the program. The Department's customer service staff has since assumed responsibility for the program. Since 1981, program costs have averaged about $4,700 a year, including materials and intern labor.

Through this program, Wellesley met its goals: to reduce peak summertime demand and overall per capita consumption, and to foster a conservation ethic among Wellesley residents. Results of recent telephone surveys show that 95% of the department's customers are aware of its conservation program and about half of these customers are using less water. The department owes this outstanding success rate to its comprehensive strategy, which ties peak demand rates, full cost pricing, sound management, and public education into one exemplary water conservation program.

If you would like to find out more about this program, please call or write:
William Edgerton, Assistant Director
Wellesley Department of Public Works
455 Worcester Street
Wellesley Hills, MA 02181
617 235-7600

Kokomo Rate Increase Passes With Flying Colors

Kokomo, Indiana
Wastewater Treatment Plant Sewer Rate Increase Campaign

Community Profile:
Medium-sized community 60 miles north of Indianapolis

Target Audience:
20,000 residential/commercial customers

Program Goals:
Gain public support for a 45% rate increase

Results:
Overwhelming public support; 45% rate increase approved

Who would think you could actually gain support for a 45 percent sewer rate increase? Kokomo, Indiana — that's who. Local officials in Kokomo recognized that customers are willing to pay a fair price for something they value. And Kokomo officials made it their job to educate citizens about the value of their community's wastewater services and the benefits of a rate increase. Kokomo officials conducted a well-planned public education program that resulted in acceptance of a 45 percent wastewater rate increase. Local businesses publicly supported the rate increase, and in two public hearings fewer than two dozen citizens spoke against it.

The cornerstone of Kokomo's strategy was advance planning. First, officials took a close look at the utility's operations and took steps to improve the plant's efficiency. In three years, the city significantly upgraded plant operations and lowered the cost of treating wastewater from $203 to $172 per million gallons. Meanwhile, the mayor, the superintendent of the wastewater treatment plant, and city staff put together a top-notch strategy for winning public support and neutralizing opposition to the much needed rate increase.

Kokomo's strategy highlighted the wastewater treatment plant's strengths as well as its weaknesses. The city praised the plant's improved operations, which had yielded a savings of $31 per million gallons treated, and spoke frankly of sewer odor problems and the need to repair and replace sewer lines. It identified sewer problems in every sector of the community and targeted 17 critical problems for improvements. Kokomo's campaign message highlighted the need to raise revenues to fund these improvements and appealed to the community's desire to have their neighborhood sewers fixed.

Kokomo's campaign strategy had three parts: convince the city council, educate the media to create a positive media image, and inform customers. The mayor and the plant superintendent were the key spokespersons. First, they briefed the city council, and then the media. Anticipating that the council would need to evaluate the rate increase and answer numerous public inquiries, they supplied council members with detailed information on finances, equipment upgrades, and capacity. They provided the media with concise interpretations of complex information, complete with charts and graphs, so reporters could accurately relay the facts to the public.

The mayor kicked-off the public campaign during his annual State of the City address by highlighting the city's wastewater operations. The mayor and his technical expert, the plant superin-

tendent, made more than 50 presentations to clubs and service groups. They distributed a brochure explaining the plant's need for a rate increase, and extended invitations to an open house tour of the plant to each group. All ratepayers received the same brochure as a bill insert. They also invited all of the city's schools to tour the plant.

While Kokomo officials had planned the campaign over a three-year period, they actually delivered their message to the community in six months. During the years leading up to the increase, the city gained public favor by regularly updating the community on treatment operations and publicizing the fact that the plant's internal cost-saving measures had postponed the rate increase for three years.

All campaign work was done by treatment plant employees and the mayor's staff. This kept costs to a minimum and encouraged the staff to become an integral part of the campaign. Staff created the information materials, slides and other visual aids, and conducted plant tours.

The city's efforts were highly rewarded. The community supported the 45 percent increase and gained a better understanding of the services provided by the wastewater treatment plant. This increase has enabled the department to provide customers with better quality service than they had before the increase.

Rather than rest in success, the city continues to publicize the progress of sewer improvements funded through the rate increase. Kokomo is following its own advice: "If you just had a rate increase, now is the time to prepare for the next one."

If you would like to find out more about this program, please call or write:
Tom High, Superintendent
Kokomo Wastewater Treatment Plant
1501 West Markland Avenue
Kokomo, Indiana 46901
317 457-5509

Douglasville-Douglas County Water and Sewer Authority Connects With the Community

Douglasville-Douglas County, Georgia Water and Sewer Authority (WSA) Public Education Campaign

Community Profile:
Suburban community 25 miles northwest of Atlanta

Target Audience:
22,000 residential/commercial customers

Program Goals:
Create a positive image of the Authority and educate consumers about water resource management

Results:
Informed consumers; secured a positive reputation in the community

To the Water and Sewer Authority (WSA) in Douglasville-Douglas County, Georgia, communicating with the public is as necessary as reading water meters. WSA developed its public education program to reverse a wave of negative public opinion. Customers echoed disappointment when a merger of city and county water and sewer departments did not bring about expected service improvements. Determined to resolve this community relations issue, the authority vowed to remain connected with the community in more ways than one.

Because of its extremely successful public education efforts, the authority is now known and respected within the community, both for its efficient water and sewer operations and its expertise on water resource issues. The rapport WSA has established with its customers has required few financial resources, and has been valuable in gaining public support for the authority's operations.

The authority began its public education efforts in 1986 with the development of its award-winning *Waterline Newsletter*. *The Waterline* was originally created to familiarize customers with WSA operations and to provide information on popular water-related concerns. Originally issued as an economical bill insert, it now includes consumer tips, articles on water conservation, and spotlights on employees. The newsletter is funded by the authority's public relations budget and averages about $9,000 a year. Its design, writing and photography are done in-house, and printing is provided by an outside vendor.

The authority also participates in Partners in Education, a program developed by the local Chamber of Commerce to foster partnerships between businesses and schools. WSA provides school children at an "adopted school" with information on water issues through creative activities, instructional aides, and incentive programs. This program enables the authority to reach not only children, but also their families, school administrators, and teachers. The Partners in Education program includes:

- Incorporating instruction on water conservation in school curriculum;
- Classroom programs for elementary children;
- Tours of the authority's facilities;
- A poster contest during National Drinking Water Week; and
- A school perfect attendance contest with bright blue ribbon awards every six weeks, and an ice cream sundae party at the end of the year.

Besides working with its adopted school, the authority also conducts classroom presentations for other local elementary and high school children, and sends school teachers resource manuals containing basic water education materials and suggestions for water-related experiments and activities. WSA's school programs are mostly funded by employee and board donations, and in part by the public relations budget.

The Waterline and WSA's involvement with local school children both provide effective ways for the authority to build a successful, county-wide public education program on a very limited budget. The success of *The Waterline* is indicated by customer questions and comments that flood the authority after each publication. Through both of its programs, WSA provides the community with a great deal of information on water issues and on its operations. This resourceful and imaginative program has markedly improved the community's image of WSA and the services it provides.

If you would like to find out more about this program, please call or write:
Terry Cole, Executive Assistant
Douglasville-Douglas County Water and Sewer Authority
P.O. Box 1157
Douglasville, Georgia 30133
404 949-7617

In Philadelphia, Pennsylvania, Hydrants are for Fires, Not for Fun

Philadelphia, Pennsylvania Philadelphia Water Department (PWD) Hydrant Campaign

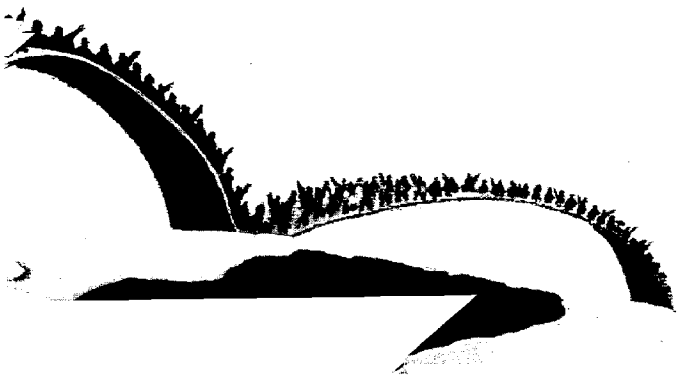
Community Profile:
Large city

Target Audience:
1.7 million residents

Program Goals:
Reduce illegal hydrant openings to conserve water and prevent accidents

Results:
Reduced illegal hydrant openings, saving 2 billion gallons of water and $600,000 over a five-year period

The Philadelphia Water Department (PWD) has an outstanding solution to the dangerous inner city legacy of using illegally opened fire hydrants for recreation on hot summer days: a large-scale, multi-media public education campaign. Through its campaign, PWD has saved the city an estimated



two billion gallons of water and $600,000 in treated water over a five-year period by reducing the incidence of illegally opened fire hydrants.

The misuse of fire hydrants can result in the loss of up to 1,000 gallons of treated water per minute. Over the course of five summers from 1980-1984, illegal hydrant openings wasted a total of 13 billion gallons of Philadelphia's treated water at a cost of $4 million. Open hydrants waste valuable water resources and cause serious injuries to children playing in the jet stream, impair the city's fire-fighting capability, interrupt service, increase energy consumption and costs, and damage and destroy hydrants.

In 1985, Philadelphia experienced its worst drought in 20 years. Motivated by the drought conditions, PWD designed a long-term public education program to help the city conserve water by abolishing illegal hydrant use. PWD's strategy for communicating with Philadelphia residents has three goals:

- Generate as much unpaid mass-media attention as possible;
- Create multiple grass roots contacts among youths and adults, and communicate a unified message in different ways; and
- Enlist adults in efforts to prevent illegal hydrant use.

PWD expresses its campaign messages, "Play Smart, Philadelphia;" "Hydrants are for Fires, Not for Fun;" and "When You Mess with Hydrants, You're Messing with Fire," to the city through public service announcements, printed materials, and media relations events. In one campaign directed to youth, the department produced a rap-music video for television, audio public service announcements with the rap track, and thousands of flyers with the rap lyrics. In another campaign directed to adults, television and radio public service announcements conveyed a distressing message about the fire hazards associated with the reduced fire-fighting capability from illegal hydrant use.

PWD's campaigns also include advertising on local transit vehicles, and displaying posters on PWD trucks. A Hydrant Outreach Team (HOT) visits camps, playgrounds, and recreation centers presenting an innovative, oversized story book starring the "Plug Uglies."

A key objective of PWD's campaign strategy is to provide safe, alternative summer recreation. The city offers sprinklers to neighborhood block captains to allow for occasional, safe recreational hydrant use, and distributes catchy pamphlets on ways to beat the summer heat and have fun in the city. Every year since 1985, PWD has refined and updated its campaign strategy. Program costs average $106,000 per year.

The department's hydrant campaign strategy, punctuated by its strong public education messages, broad distribution of materials, a hydrant locking campaign, and the city's swift response to reported hydrant openings, has been highly successful. The 20-fold increase in telephone calls since 1985 reporting open hydrants reflects changing attitudes and awareness about illegal hydrant use. The campaign's success is best marked by the two billion gallons of water conserved and a net savings of $600,000 by PWD over the past five years.

If you would like more information about this program, please call or write:
Maureen Sullivan, Public Education Officer
Philadelphia Water Department
ARA Tower 1101 Market Street, 3rd Floor
Philadelphia, PA 19107-2994
215 592-6144

Community-Wide Conservation Takes Hold in Palo Alto, California

Palo Alto, California
Utilities Department Resource Conservation
Water Management Plan

Community Profile:
Metropolitan area community 45 miles south of San Francisco

Target Audience:
30,000 residential, commercial, and industrial customers

Program Goals:
Reduce water use by 27 percent during water restriction periods and raise citizen awareness of conservation

Results:
32 percent reduction in water use during restricted periods, maintenance of a 15 percent reduction during non-restricted periods, and increased citizen awareness

The City of Palo Alto Utilities Department's Resource Conservation staff knows how to reach the public during a crisis. In 1988, due to severe drought conditions, the San Francisco Water District (SFWD) reduced the amount of water it supplied to Palo Alto and 29 other communities in the Bay Area.

This forced Palo Alto to cut its own water usage by 27 percent or face monetary penalties. To achieve this reduction, Palo Alto has developed an aggressive voluntary conservation plan based on widespread public education and "inverted" rates — rates that require large water users to pay more for their water. Through its plan, Palo Alto has reduced its water use by 32 percent during restricted periods, and has maintained a 15 percent conservation level during non-restricted periods.

The key to Palo Alto's public education strategy lies in targeting its conservation message to specific community groups and repeating the message in numerous ways. Palo Alto's water conservation message reaches residential customers, small and large businesses, and schools.

The department provides residential users with water conservation kits with flow-measuring bags to check average shower flow, toilet tank bags that reduce the amount of water used with each flush, and tips on ways to conserve water around the house; issues 10-16 water supply updates and conservation notices a year; and pursues an active print campaign in the local newspaper. Free on-site home water audits are also available.

To encourage its smaller commercial customers to conserve water, Palo Alto has designed an outreach program that helps businesses integrate water-saving activities into business processes and advocates year-round conservation. The program encourages businesses to take advantage of free audit services, use reclaimed water for construction and irrigation, and design landscaping that requires little water. The program also asks businesses to apply small measures, such as serving water only upon request in restaurants, and using brooms rather than hoses for sidewalk cleaning.

Palo Alto has created a special program to assist the conservation efforts of its largest business customers. This program provides companies with personalized attention from a department liaison who helps develop conservation plans specific to each business. The department also sponsors workshops on conservation.

Palo Alto reaches school children by conducting 10 to 30 water education presentations a year for youth in kindergarten through twelfth grade. They also make available to teachers a curriculum lending library, and an energy and water conservation computer software program. A traveling theater group hired by the city often presents plays about energy and water issues to children in kindergarten through sixth grade.

To emphasize its conservation message to the whole community, the department posts signs in publications; publishes news releases, advertisements, fact sheets, flyers, posters, signs, and stickers; and sponsors special water education events. It also addresses the specific conservation issues of each group — residents, small businesses, large businesses, and schools — through targeted letters and newsletters.

To help enforce local water conservation ordinances, the city hires summer employees, known as the "Gush Busters." The Gush Busters travel throughout the city on bicycles or mopeds to find ordinance violators — citizens using illegal practices, such as gutter flooding and sidewalk washing. The Gush Busters warn residents of outdoor water use restrictions during summer months, and issue two violation warnings before installing a flow restrictor.

Palo Alto's initial program costs ranged from $5,400 - $17,000 and consisted mainly of distributing bill inserts. As the drought worsened, Palo Alto's campaign costs increased to about $100,000, due to more aggressive advertising and employing the "Gush Busters" program.

The department's resourceful response to the worsening water crisis, broad community approach, and long-term thinking have helped the city meet its mandatory water use reductions by instilling a deep commitment to water conservation in the Palo Alto community.

If you would like more information on this program, please call or write:
Linda Clerkson, Program Coordinator
City of Palo Alto Utilities Department
Resource Conservation
P.O. Box 10250
Palo Alto, CA 94303
415 329-2656

Acknowledgements:

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