



As part of a campaign to promote the reduction of pollution, children colored educational posters at the Ocean View Beach Festival.

Lessons learned: Implementing a storm water public education program

By Nancy E. Gray

With the advent of the National Pollutant Discharge Elimination System storm water permit regulations, many Virginia localities are faced with developing and implementing a public education and information (PE&I) program that promotes the reduction of runoff pollution. To meet permit requirements, the PE&I program should focus on reducing the targeted pollutants to the storm sewer system: fertilizers, pesticides, herbicides, used motor oil and household hazardous wastes. In Norfolk, we have learned valuable lessons about putting an effective storm water PE&I program in place.

As a large city with a population of more than 250,000, Norfolk was one of the first localities to submit its Virginia Pollutant Discharge Elimination System permit application to the Virginia Department of Environmental Quality and to implement a storm water utility. Part one of the permit application was submitted on Oct. 31, 1991, and part two was submitted on Nov. 10, 1992. In response to authority given by Virginia law, a storm water utility was implemented on July 1, 1991. A new Division of Environmental Storm Water Management was also created in the Department of Public

Works on July 1, 1991, combining the Street Sweeping Bureau from the Division of Waste Management and the Drains Bureau from the Division of Streets and Bridges (also in the Department of Public Works).

"Literally, Norfolk was a guinea pig for Virginia's permit application for municipal separate storm sewer systems. We knew that other localities would be watching closely as we forged ahead with our environmental storm water management program," remembers Chris Chambers, the Department of Public Works' design engineer who was responsible for overseeing the permit application and creation of the program, the utility and the department's new Division of Environmental Storm Water Management.

Those involved in the permit process are aware that the storm water management plan must include source control measures to reduce pollutants, as well as a program and schedule to detect and remove non-storm water discharges from the storm sewer system. To help accomplish this, a PE&I program is required for storm water pollution prevention (which includes the application of herbicides, pesticides, and fertilizer) and the proper

management and disposal of used motor oil and toxic materials (which include household hazardous wastes). "An effective public education agenda is essential to the success of Norfolk's environmental storm water management program. Preventing pollutants from entering the storm water system is a key program objective and one that requires a comprehensive approach regarding public awareness," says Jim Daman, the division's storm water engineer.

Developing a public information plan

The public information plan is the nucleus of the PE&I program. Before developing a public information plan, determine available staffing and funding resources. In Norfolk, staffing was one of the concerns with developing and implementing a PE&I program. Norfolk's engineering consultant suggested use of an ad agency for public relations, and the city secured proposals from ad agencies. It was decided to use in-house staff, however, to develop and implement the program.

In 1991 there was a public information staff of one person for the entire Department of Public Works. Norfolk's engineering consultant

developing the permit application recommended a public information staff of 1.5 to handle storm water programs exclusively. Now, there is one full-time staff person in the Division of Environmental Storm Water Management, with additional support provided by the department's Management Services Division.

Funding levels for public information materials have fluctuated greatly since fiscal year 1992, from \$0 to \$50,000, but have stabilized at \$25,000 for this fiscal year and the next. At the onset in 1991, there was a lack of recognition of need for a PE&I program budget, with the environmental storm water management program primarily focusing on engineering. Since then, there has been a gradual increase in acceptance of the need for a PE&I program. The current budget for materials is \$25,000, which remains somewhat below suggested guidelines for this type of program. Norfolk provides a cost-effective PE&I program that strives for maximum results for a minimal investment.

In addition to determining staffing and funding resources, it is also

important to conduct surveys, particularly at the onset, to obtain baseline public attitudes and awareness. The Hampton Roads Municipal Communicators, with assistance from Christopher Newport University, conducted an environmental attitudes phone survey in March 1992 and March 1994 to determine public awareness and acceptance of regional storm water programs. The survey asked participants about the importance of several environmental issues, disposal practices, general knowledge about storm water and the city's performance in protecting the environment. In Norfolk, a random sampling of about 100 participating residents was obtained through the Norfolk city directory.

The results of the followup survey revealed that air and water pollution were very closely ranked as the two most important environmental issues. With regard to disposal practices, the majority of residents (54 percent) took their used motor oil to a gas station or garage for recycling.

Encouragingly, more residents knew that the water that flows into storm drains went to local waterways (33 percent) rather than to a sewage

treatment plant (24 percent). However, the majority of the residents (60 percent) were not familiar with the term "storm water management." The quality of our local waterways was rated as satisfactory (48 percent) or poor (45 percent), according to most residents, with the city's performance in protecting the environment rated overall as fair (51 percent). Only minor changes in the results were noted in the two-year period between the initial and followup surveys. Realistically, it could take several years before attitudes and awareness change.

Once the resources and survey results are determined, the public information plan should be developed at the onset of the environmental storm water management program, preferably before a fee is implemented. The initial plan should define the PE&I program objectives, target audiences, the method of communication of the objectives to each audience (components), staff members responsible for implementing the components and the component timeframes (geared to the permit). Keep in mind that the plan should be focused on reducing the targeted pollutants: fertilizers, pesticides, herbicides, used motor oil and household hazardous wastes.

Often, as cities reduce staff size, a common side effect is to develop public information materials on an as-needed basis as a reaction to some PE&I crisis. Without a public information plan, however, there is no assurance that the permit PE&I requirements are being met, that the most cost-effective PE&I program is being implemented and that public understanding is being fostered. A public information plan keeps the PE&I program focused and on track.

Dealing with opposition to storm water fees

The PE&I program was under way before the Department of Public Works had the opportunity to create a formal public information plan. With the implementation of the storm water utility on July 1, 1991, an insert

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was included with the public service bill to describe the storm water fee, the services it provides, and the reason for its implementation. Unlike traditional user fees, such as water and refuse collection, customers had difficulty grasping the concept of a "storm water fee." Despite various public education efforts, the fee was often referred to as the "rain tax," because customers thought they were being billed for rain water. It was apparent through staff contact with the public that they expected immediate, highly visible results from paying the fee, especially with regard to flood control.

Rather than call it a storm water fee, localities should consider calling it an environmental fee, which seems more appropriate and is an easier concept to grasp. Norfolk's storm water fee (as it is still called) not only pays for the environmental storm water management program, but it also pays for the requirements of the Chesapeake Bay Preservation Act, the Virginia Erosion and Sedimentation Control Law, the Virginia Wetlands Use and Development Regulations and the federal Clean Water Act. Indeed, with Norfolk surrounded by water, there is a very tangible reminder of water quality and the effects of water pollution. Because the Department of Public Works was on the fast track to notify public service bill payers about the fee, there was no opportunity to set up a task force of citizens and business owners before implementing the utility to advise them of the federal and state mandates and Norfolk's environmental storm water management program and utility.

"When any program is on an expedient implementation schedule, the necessary timeline to foster public acceptance is greatly reduced. This was the case with our storm water fee. Had we had the time, we would have enhanced our pre-fee communications efforts. As it was, we did a very competent after-the-fact job. But that, for obvious reasons, is not the best route," Daman says.

In addition to the public, city council members and other political

groups play key roles in the acceptance of the environmental storm water management program, including the fee structure. Staff needs to work extensively with them to encourage understanding of the fee. This will help them become effective public relations ambassadors and will encourage their acceptance of the storm water operating budget, and therefore the PE&I budget, prior to each fiscal year.


Learning lessons: Image, regionalism and visibility

It is important to work together as a region, if possible, especially at the onset when individual localities may have very limited resources for implementing a PE&I program. Norfolk worked with other Hampton Roads cities -- including Virginia Beach, Portsmouth, Chesapeake, Hampton and Newport News -- through the Hampton Roads Municipal Communicators. The group completed several projects, including a video tape, W. Q. (Water Quality) Fish coloring poster, W. Q. Fish T-shirt, environmental attitudes

phone surveys and a regional storm drain stenciling kickoff. These projects gave Norfolk a boost at the onset of the PE&I program.

"By pooling the intellectual and financial resources of the region's localities, these projects proved to be cost-effective solutions to the need for education and information. The common regional theme allowed each locality to benefit from its neighbor's efforts," says John Carlock, director of physical and environmental planning for the Hampton Roads Planning District Commission. In response to "what am I getting for my fee," increased visibility of services and programs is essential. For example, in Norfolk vehicles are marked with "Environmental Storm Water," and signs are posted at capital improvement sites. The Division of Environmental Storm Water Management takes every opportunity to inform affected businesses and residents about a project that will improve their quality of life.

Image is as important as visibility. If staff answering billing inquiries reply with an "I don't know" about



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services the fee provides, the public's confidence will be shaken. Extensive training is necessary, to include a list of possible questions and answers, so that staff are prepared for callers. Staff members who work in the field performing projects should also be equipped with public information materials in their vehicles, in case they are approached with questions. Additionally, materials should be fairly conservative in terms of cost. Although they look impressive, flashy public information materials and public displays are not encouraged because the public will perceive that excessive funds are being spent for public education, rather than street sweeping or drainage improvements.

Reflecting on the PE&I program's accomplishments

The first year or so, a majority of the PE&I efforts focused on explaining why the fee was being implemented (because of federal and state mandates) and what the fee provided (pollution prevention programs as well as flood control projects). With time, there was a shift in focus from the mandates to raising environmen-

tal consciousness ("thank you for helping to improve the environment in Norfolk"). Messages were consistently communicated through the public service bill, and there was an intensive effort to make public presentations. Fact sheets were also developed as handouts.

Although the fee question is still asked, the PE&I program now focuses more on pollution prevention, such as fertilizing and lawn care tips. The public service bill insert is one of the preferred communication mediums because of its high market saturation. Norfolk has developed an impressive array of public information materials, including Storm Water News, public service bill inserts, numerous brochures, coloring posters for schools, as well as pencils, magnets, car litter bags and stickers for children. These materials have a variety of messages, from explaining the concept of storm water, to preventing pollution, to encouraging the reporting of polluting activities. Perhaps the greatest challenges have been developing a water quality program for school children and a storm drain stenciling program.

Despite a tentative beginning, Norfolk now has a rigorous PE&I program, which has been used as an example for other localities. Although Norfolk's PE&I program is almost 4 years old, it is evident that it will always be an essential component of the environmental storm water management program, maturing with the overall program.

"Norfolk recognizes the importance of public education and the ongoing need to protect our natural resources. While significant public education efforts have been undertaken by Norfolk, the success of the program will require that we continue to reinforce the critical role that the public plays in preserving our environment," says Daman.

Perhaps one of the most important aspects about the PE&I program is the requirement for measurable, tangible results of pollution reduction. "It will not be easy to quantify our success in improving water quality through storm water management programs. However, comprehensive PE&I programs, such as the Norfolk program, which instill a basic understanding of storm water issues and stress practical, everyday activities, are likely to lead to greater support for the local environmental storm water program and, in the long run, to greater water quality improvements," says Carlock.

Above all, be patient! It could easily take several years to establish a PE&I program a locality can truly be proud of. ▣

About the author

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