

# Pipeline



*Small Community Wastewater Issues Explained to the Public*

## Protecting Your Source Water - Volunteers Help Get the Job Done

**M**any human activities impact our drinking water sources. Population increases put extra pressure on our water resources, but humans and animals need clean water and healthy ecosystems to enjoy a vibrant quality of life. Local volunteers can be put into action to stabilize or restore watershed health while protecting critical habitats.

Protecting these source waters, whether they are lakes, rivers, streams, or aquifers, from any type of pollution or contamination, will decrease the cost of treating water before it can be used in a household. In other words, it is less expensive to keep our water clean in the first place than to clean it up later. As extensive drought conditions occur around the country, this treasure of clean flowing water is becoming more precious. And as communities' budgets are trimmed, source water protection projects fall onto the shoulders of local volunteers to get the work done.

Recruiting volunteers not only provides the hands and muscles to get the



physical work done, but it also brings in new ideas, providing a revitalizing mental energy.

When it comes to addressing source water contamination issues, small communities share one trait: a lack of funding. Community leaders have the opportunity to tap into the community spirit and the specialized skills of the voluntary sector and apply them to source water protection projects. Volunteer groups can fill this gap—but municipalities often lack information about how to effectively use environmental volunteers and organizations for these projects.

This issue of *Pipeline* newsletter will provide some tips and guidelines for recruiting and getting the most out of your hometown volunteers, involving them in addressing local source water protection issues.

Effective source water protection requires an ongoing community-wide commitment. Because source water can be polluted in so many different ways, each community must address its unique conditions. It is important that communities establish clear source protection goals (e.g., maintaining water quality, improving water quality). The first part of a

source water management plan is to determine the problem and decide what can be done about it.

Key elements of any successful volunteer effort are: clear goals, established plans and timetables, engaging and exciting activities, a strong will to succeed, and recognition of success. The source water assessment conducted for your area would be a good place to start when determining the most press-

ing issues for your watershed. A critical step in assuring the quality of drinking water resources is to identify the cause of current or potential contamination problems. Volunteers are usually very interested in being involved in identifying potential sources of pollutants that could contaminate their water supply.

Some general examples of the typical activities that volunteers are achieving across the country are:

- public awareness and education assignments to encourage homeowners to properly maintain their onsite wastewater treatment system;
- conservation projects that encourage the use of water-saving devices or sustainable gardening and lawn care practices;
- pollution prevention tasks that include identifying wellhead protection areas or reducing runoff from roads onto sensitive areas;
- public policy initiatives including adopting new protective land use measures or implementing a wellhead protection program;
- and best management practices that promote proper selection and application of pesticides and fertilizers or educate the community on the proper disposal of waste.

Volunteers, if adequately trained, are capable of assisting with a wide variety of needed water protection projects including stabilizing stream banks with new plant materials to reduce erosion, conducting watershed assessments to determine threats

to the source water, and clearing stream banks or beaches of trash and debris.

Across the country, as part of the U.S. Environmental Protection Agency's (EPA) Volunteer Monitoring Program, trained citizen volunteers record and report the condition of their local streams, lakes, estuaries, and wetlands. The EPA encourages all citizens to learn about their water resources and supports volunteer monitoring because of its many benefits. Volunteer monitors build awareness of pollution problems, become trained in pollution prevention, help clean up problem sites, provide data for waters that may otherwise be neglected, and increase the amount of water quality information available to decision-makers at all levels of government.



**National  
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**Pipeline**

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William (Bill) Hasselkus — *Project Officer*  
Municipal Support Division,  
Office of Wastewater Management

National Small Flows Clearinghouse  
West Virginia University, Morgantown, WV

Dr. Gerald Iwan — *Executive Director*  
Mark Kemp-Rye — *Int. Communications Director*  
Marilyn Noah — *Writer/Editor*  
Jennifer Hause — *Technical Advisor*  
Zane Satterfield — *Technical Advisor*  
John Fekete — *Senior Project Coordinator*  
Cattlin Buckley — *Graphic Designer*

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## The Time is Right to Volunteer

“Government at all levels is more effective when it partners with community groups and citizens to solve problems,” says Stephen Goldsmith, former mayor of Indianapolis and board chair of the Corporation for National and Community Service (CNCS), a federal agency created in 1993.

The recently enacted Edward M. Kennedy Serve America Act will reauthorize and expand national service programs administered by the CNCS. (The Corporation engages four million Americans in result-driven service each year, including 75,000 AmeriCorps members, 492,000 Senior Corps volunteers, 1.1 million Learn and Serve America students, and 2.2 million additional community volunteers mobilized and managed through the agency’s programs.)

A recent CNCS report states that volunteering in America

has increased by one million volunteers over the past five years and with growing economic pressures, there is now a special opportunity to benefit from volunteers. Numbers are also expected to rise as the baby boomers double the number of older American volunteers while young people are volunteering at higher rates than the last generation.

“The research shows that volunteering isn’t as much about having the time to volunteer but creating volunteering opportunities that people want to make the time for,” says Dr. Robert Grimm with CNCS.

## Environmental Volunteers Are Very Dedicated Indeed

Environmental volunteers are often results-oriented and are willing to contribute many hours to a worthwhile project.

Watershed groups often initially come together to address a distinct critical situation, such as pollution that has come to the point where it can no longer be ignored. Once these folks get their feet wet, so to speak, they are eager and willing to take on new challenges.

People volunteer for different reasons, and any group of people will have a wide range of talents. If you carefully describe the jobs avail-

## Why People Volunteer

*If you want to design meaningful rewards for your volunteers, a good starting point is to look at the reasons they volunteered in the first place. What did they hope to get? How can you help meet those needs and expectations? Some common motivations for volunteering are:*

- to make an impact
- to be an advocate
- to be part of particular organization
- because of a commitment to a cause or belief
- to be part of a team
- to get to know a new community
- to meet people and make friends
- to learn something
- to explore a career
- to gain experience and build their resume
- to gain a sense of personal pride and fulfillment
- to feel needed and appreciated
- for fun
- as an excuse to do something they love
- to use a particular skill
- to give back something to the community
- because they were asked.

able for volunteers to complete, they can determine whether the opportunities match their interests and skills. The time spent preparing for volunteers and establishing clear responsibilities will help create an effective and efficient volunteer team.

### Potential volunteers

Depending on your particular community, possible sources of help can be found by contacting middle and high school groups, local garden clubs, college horticulture departments, “green industry” businesses such as





garden centers, landscape design firms, senior citizen organizations, service organizations like the local cooperative extension service, The Izaak Walton League of America, Master Gardeners, Rotary International, Boy and Girl Scouts, wildlife-oriented clubs such as the Wild Turkey Federation, Trout Unlimited or Ducks Unlimited, service organizations such as the Moose or Elks, service fraternities, faith-based groups, and local corporations' volunteer service programs.

### *Recruiting*

Environmental programs are unique as are the members attracted to this type of service. Inform potential volunteers of your expectations, including time commitments and tasks. Be as specific as possible; give the dates and times their services will be needed.

Recruitment ideas include:

- Informational posters displayed at parks and state and national forests or Earth Day presentations that describe the issues and give a rundown of volunteer jobs.
- Advertise for volunteer support in club and agency newsletters.
- Send out public service announcements to local papers stating your needs and advertising your meetings.
- Recruit volunteers on the Web. Advertise for help on your local city or community page. Volunteer.gov/gov might be a good place to start.

### *Orientation/training*

One person from each of your volunteer corps should be designated as the contact and will receive all communications on behalf of the group. This person will attend any orientations required before volunteering and communicate information from this orientation to other members.

Be organized as you seek volunteers and be prepared to give specific assignments. One of the easiest ways to lose volunteers is to get them excited about a project and then not have a specific assignment or task. This doesn't mean that you have to have all the details worked out in advance; helping with the planning can be part of a volunteer's task. However, have enough defined so that each person knows what they have agreed to do and when it is needed by. Make

sure every task has a completion date. Don't let them start a job until they know exactly what their duties and limitations are. Where appropriate, develop checklists and job descriptions for key roles.

Once you have identified potential volunteering activities, keep the workers informed as to:

- the exact times and dates volunteers will need to be there,
- driving and parking directions,
- any age or physical restrictions,
- what tools and resources will be provided, and what the volunteers are expected to bring themselves,
- what food and drinks will be provided, and what the volunteers are expected to bring themselves,
- recommended dress or protective gear (gloves, boots, etc).



Many environmental volunteer programs and projects go unevaluated, and their successes go undocumented. For hard-working volunteers, this leads to a sense of futility and, ultimately, burnout. Use both quantitative and qualitative measures of success. Measurable or quantitative indicators of success such as the number of trees you planted or volunteers you recruited are valuable for recognition.

An organization is made up of people with varying interests, motivations, and talents. A good volunteer program will satisfy the needs of its people.

Be sure to praise good work. The most important element to maintaining an energized, active volunteer base is acknowledgment. Acknowledge their contribution and their generosity in giving their time.

Ways to recognize your volunteers might include dinners or parties, certificates, letters to their employers or school counselors, public recognition, and plenty of thank yous—both privately and in public.

Post signs about your project at your work sites to keep neighbors and other citizens aware of what's going on at their local park or riverbank. A simple sign at the site can fill them in on what you're doing and who to call for more information. This public announcement also gives your volunteers community exposure and may recruit additional help.



### *Keep the Ball Rolling*

Veteran environmental groups have learned that there are several key ways to maintain enthusiasm for their projects:

- Keep lines of communication open between the members and the community.
- Maintain a simple, logical structure for your organization.
- Find money to pay for projects.
- Keep track of your progress and celebrate your successes, no matter how small.

### **Volunteers (and Volunteering) Make Things Better**

As communities become aware of the value of their clean water and they make every effort to protect their water source from contamination, the help of local volunteers will be crucial. As more people become involved in these projects, they feel invested in the effort, the greater the community spirit and pride of place, improving quality of life and strengthening the community. Clean water matters to all of us. It makes sense that we all help to keep it that way.

## Resources

### *Corporation for National and Community Service*

The CNCS promotes volunteering through grant applications, research, recognition, and training and technical assistance. Find the national service programs currently at work in your state at [nationalservice.gov/about/role\\_impact/state\\_profiles.asp](http://nationalservice.gov/about/role_impact/state_profiles.asp). CNCS's full report on the status of volunteering in America can be accessed at [www.VolunteeringInAmerica.gov](http://www.VolunteeringInAmerica.gov).

### *US EPA's Volunteer Monitoring Program*

To find out more about EPA's Volunteer Monitoring Program, visit [www.epa.gov/volunteer/](http://www.epa.gov/volunteer/).

## Related NESC Products

### *Pipeline Winter 2008: Source Water Protection for Local Officials*

This issue explains how a community should use its source water assessment plan to protect its most valuable asset—its drinking water sources. Included is a list of funding agencies for source water and wellhead protection programs. A case study is presented that details the efforts of a rural New Hampshire town to protect the water quality of a neighboring lake from failing septic treatment systems. Can be viewed or downloaded for free at [www.nesc.wvu.edu/pdf/ww/publications/pipeline/pl\\_wi09.pdf](http://www.nesc.wvu.edu/pdf/ww/publications/pipeline/pl_wi09.pdf).

### *Pipeline Winter 2007: Pharmaceuticals and Personal Care Products, An Overview*

This issue discusses the ways that PPCPs may get into the water environment and how they may affect it. It also includes a center-fold poster from the U.S. EPA Origins and Fate of Pharmaceuticals and Personal Care Products. Can be viewed or downloaded for free at [www.nesc.wvu.edu/pdf/WW/publications/pipeline/pl\\_wi07.pdf](http://www.nesc.wvu.edu/pdf/WW/publications/pipeline/pl_wi07.pdf).

### *Watershed Planning - From Start to Finish.*

This booklet combines four useful articles about watershed approaches to water quality problems previously printed in *On Tap* magazine. Cost: \$1.50. Order #DWBLCS04.

See "How to Order" on page 8.

### *Guide to Groundwater Guardian*

The Groundwater Guardian is a program support by The Groundwater Foundation as a catalyst for groundwater protection programs such as local wellhead protection or source water protection. This packet includes a 52-page booklet that details how a community can become part of the Groundwater Guardian program plus copies of affiliate and community forms. Cost: \$5.85. Order #DWPLPE379

### *Source Water Assessment and Protection*

Source waters are the lakes, rivers, streams and aquifers that supply people with their drinking water. For a community to stay healthy and prosperous, its residents must protect this source. This 8-page pamphlet produced by The Groundwater Foundation gives a simple overview of source water assessments and offers suggestion to the public on what it means to them. Cost: \$4.55. Order #DWBLPE383

### *Wellhead Protection: Lessons Learned Through Local Stewardship*

Groundwater is often the lifeblood of many communities; the importance of protecting it is an undisputed fact although its hidden underground nature often causes it to be neglected. The Groundwater Foundation has produced this 15-page booklet to describe the key elements of wellhead protection programs to help communities understand their responsibilities in this effort. Cost: \$7.15. Product # DWBLPE382



## SMART About Water Is in the Field

*SMART About Water, the source water and wellhead protection program being spearheaded by NESC and the Rural Community Assistance Partnership (RCAP) with funding from the U.S. EPA, is helping communities across the country.*

*"In the first phase of the project, we worked with national leaders to identify best practices and top-notch materials for source water protection," says Gerald Iwan, Ph.D., NESC executive director.*

*"Then, we developed support materials and worked with trainers from all six RCAP regions. Beginning last fall, SMART About Water work began in earnest in small communities who recognized the value of stellar water quality. These communities need volunteers, a fact emphasized by our training program."*

*According to Dave Clark, RCAP director of environmental programs, 53 training programs have taken place involving 920 people from 390 small drinking water systems. In addition, RCAP has identified 22 trailblazer communities for more intensive work on their source water protection plans.*

*For more information about the SMART About Water project, visit [www.nesc.wvu.edu/smart/](http://www.nesc.wvu.edu/smart/) or call NESC at (800) 624-8301 or RCAP at (800) 321-7227.*

## Case Studies

### **Volunteers Collect Unwanted Pharmaceuticals in Illinois**

Improved analytical capabilities have shown that there are more questions about the possible health effects of un-prescribed pharmaceuticals on humans and on aquatic life than there are answers. Most of the research to date has only proven that there are numerous medications present in our waterways.

One key to limiting the amount of pharmaceuticals that enter the environment is by reducing direct disposal (by flushing down the toilet or the drain) of unused drugs. (Read more about pharmaceuticals and personal care products contamination in the Winter 2007 issue of *Pipeline* newsletter.)

In response to the evidence of the presence of 56 chemicals typically found in drugs and personal-care products from recent Lake Michigan samples, the Illinois Environmental Protection Agency (IEPA) with the Central Regional Groundwater Protection committee, set up a network of collection centers as part of a pilot project in March of 2008 to discourage the flushing of these chemicals. The Central Regional Groundwater Protection Committee is made up of volunteer representatives from the county and municipal government, operators of public water supplies that use groundwater, the general public, as well as state agencies.

The two goals of the project were to establish a network of secure pharmaceutical collection centers throughout the state and to educate the public about environmentally appropriate disposal methods for unwanted medicines using posters, fact sheets, and pamphlets.

In 2008, four unwanted medication collection events were held, filling six 55-gallon drums (which have been accepted by the IEPA for proper disposal). Collection sites were located near busy shopping areas for convenience and even though controlled substances were not collected, local law enforcement provided security.

Additional incentives included free private well testing for nitrate and a collection area for used compact fluorescent lights bulbs. Several more of these events have been scheduled for 2009. The eventual goal of the pilot program will be to establish a permanent collection site where local residents can drop off old or unused meds.

### Reprint Info

Readers are encouraged to reprint *Pipeline* articles in local newspapers or include them in flyers, newsletters, or educational presentations. Please include the name and phone number of the National Environmental Service Center (NESC) on the reprinted information and send us a copy for our files. If you have any questions about reprinting articles or about any of the topics discussed in this newsletter, please contact the NESC at (800) 624-8301.

### **The Green Mountain Conservation Group: Community-based Watershed Protection**

With a motto of "Protecting the Ossipee Watershed since 1997", New Hampshire's Green Mountain Conservation Group (GMCG) is no fly-by-night outfit. Dedicated to the protection and conservation of natural resources in the Ossipee Watershed including the towns of Effingham, Freedom, Madison, Ossipee, Sandwich, and Tamworth, the GMCG is a self-described community-based, charitable organization.

During 2007, a steering committee of residents, municipal officials, and water suppliers from each of the 26 watershed towns was formed to identify threats to groundwater sources and to encourage reduction of threats by implementing best management practices. This steering committee volunteered more than 1,700 hours of time to the project over the past two years. Workshops, conferences and educational events were held. One hundred seventy-three potential sources of contamination were recoded and mapped with GIS.

GMCG has also recently joined forces with the state of Maine's Saco River Corridor Commission (SRCC) to create the Saco/Ossipee Watershed Water Quality Monitoring Program that is designed to be one water-quality monitoring program that encompasses one watershed, two states, and 26 towns.

Besides administering a water-sampling program by trained volunteer staff at over 35 sites, this now eight-year-old program uses volunteers to carry out visual checks of boats for variable milfoil (an invasive water plant) and macroinvertebrates (organisms without a backbone such as worms, snails, insects). Visible to the naked eye, these water creatures are good water quality indicators. School children are involved in carrying out these observations while they are learning about aquatic biology and water quality.

With a \$15,000 grant from the New Hampshire Department of Environmental Services (DES), the GMCG has put together a source water protection project to identify potential contamination sources in an attempt to improve groundwater protection for six towns in the area. Public education efforts include the creation and distribution of a drinking water protection brochure and the hosting of a regional drinking water protection meeting. Potential contamination sources will be inspected and entered into a database for use by the DES and local public water suppliers.

In 2009-10, they anticipate about 30 individuals to be actively involved in the aquifer overlay and ordinance project while continuing to conduct educational workshops. They also plan on initiating a groundwater monitoring program this year, and working with towns on implementing best management practices for surface and groundwater protection.

# RELATED NESC PRODUCTS

## Community Onsite Options and Approaches to Onsite Management Videos on DVD

National Environmental Services Center

These videos discuss the implementation of onsite management systems (OMS) in five communities. Wastewater professionals from each of the communities explain why their community instituted an OMS, the approach they took, how it is administered, and its benefits. Ongoing, competent maintenance, monitoring, and management are emphasized, as well as discussion of advanced treatment systems, such as aerobic treatment units, sand filters, and cluster systems.

DPDVMG56/DVD (2003) . . . . . \$20.00

## Community Self Assessment

NESC/National Onsite Demonstration Program

The community self-assessment process helps a community collect information that can serve as a basis for local wastewater management strategies. The objective of this interactive CD-ROM is to provide information to community leaders, local officials, and other interested parties to help them understand the community's existing situation. The primary audiences for this tool are community environmental and public health officials, selected community professionals, and other related community professionals and associated staff possessing the appropriate expertise and knowledge to complete the assessment process.

DPCDM03/CD-ROM (2002) . . . . . \$10.00

## Financing Your Community's Onsite Management System

NESC/National Onsite Demonstration Program

This interactive CD-ROM provides information about funding streams that may be available to your community through various agencies and organizations to finance your community onsite wastewater management efforts.

DPCDFN01/CD-ROM (2002) . . . . . \$10.00



## Septic Systems, Soils, and Groundwater Protection

Cornell Cooperative Extension

This booklet discusses basic background information about septic systems and their environmental effects. The characteristics of raw sewage and septic tank effluent are discussed in detail along with potential public or environmental health concerns.

WWBLGN261/Booklet: 16 pp. (N/A) . . . . . \$2.45

### How to Order NESC Products

To place an order, call us toll free at (800) 624-8301 or (304) 293-4191 or send email to [info@mail.nesc.wvu.edu](mailto:info@mail.nesc.wvu.edu). Be prepared to give the item number and title of the product you wish to order. Shipping charges will apply.



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