

## **State Source Water Practitioners Workshop Portland, OR; September 28, 2005**

At the Ground Water Protection Council (GWPC) Annual Forum, GWPC, the Association of State Drinking Water Administrators (ASDWA), and EPA co-sponsored a day-long workshop on source water protection (SWP). Attendees representing 33 states, EPA Headquarters and regions, ASDWA, GWPC, and the National Rural Water Association (NRWA) shared their ideas and experiences on SWP.

**Sarah Pillsbury**, GWPC President, welcomed the group, described the composition of the audience, and introduced the Source Water Collaborative, a partnership of professionals dedicated to moving toward protecting drinking water supplies.

**Jim Taft**, ASDWA, mentioned that SWP is at a crossroads. He said that there are good people, data and successes, but constraints to implementing protection exist as well. The completed assessments are a catalyst for action, and other drivers for protection include EPA's strategic plan and the 2008 goals for SWP. The challenges ahead include financial constraints, a lack of statutory authority for protection, and institutional constraints, such as housing of Clean Water Act (CWA) and Safe Drinking Water Act (SDWA) programs in different state agencies. Locals are tied by these constraints as well. Jim said that we need to articulate lower cost options and the incentives and benefits of protection. He added that partnerships and collaboration are important; one example is the Source Water Collaborative.

**Roy Simon**, EPA Headquarters, presented EPA's draft action plan for SWP. The goal of the action plan is safeguarding the nation's supply of drinking water by making it easier for people to integrate source water protection into key decisions, especially land use decisions.

The draft action plan incorporates three strategies:

1. Packaging existing information.
2. More decision-makers to receive key information.
3. Networking at the state and local levels.

Roy also discussed the definition of substantial implementation of SWP, and the importance of thinking of protection in terms of water quality and disease prevention. He said that achieving the goal of SWP will mean state and local capacity, forming effective partnerships, and gathering the necessary data to manage source water.

## **Gathering, Interpreting, Reporting and Motivating Local Source Water Protection Efforts**

### ***Tracking Local Source Water Protection Efforts***

Dierdre Mason, ASDWA, presented the results of an ASDWA survey of states on how they are collecting information to track local SWP efforts. States are compiling SWP information from public water system files, sanitary surveys, voluntary surveys, and data bases (e.g., SDWIS) and spreadsheets. She added that ASDWA plans to develop a set of case studies on specific state approaches to gathering information and reporting on local SWP efforts. ASDWA will also develop an information clearing house on SWP approaches.

Paul Susca, New Hampshire Department of Environmental Services (NH DES), reported on an ongoing GWPC-NH DES demonstration project to gather information on local implementation of SWP. The project team is surveying all 235 municipalities in the State to ask about land use planning, zoning, related ordinances, and regulations. They also requested copies of ordinances and regulations. The results of this project are pending.

Participants were asked to provide other examples of how they keep track of local SWP efforts in their states.

- Louisiana DEQ sponsors a series of parish meetings to promote public education and awareness of protection issues. The key players on the workshops are the utility, citizens, and local officials; RWA staff help as well. As an incentive to attend, drinking water staff earn 2 hours of continuing education credit. At the conclusion of the effort, DEQ verifies that all components of the wellhead protection (WHP) plan are complete.
- Region 9 is working to develop a self-reporting scheme for California systems.
- One option for tracking local efforts is to require a statement on the status of SWP in the annual Consumer Confidence Report. Placement of this information could be tracked.
- The New England Interstate Water Pollution Control Commission (NEIWPCC) developed tools for local communities.

### ***State Definitions of Substantial Implementation of SWP***

Roy cited the difficulties in setting a public goal for protection. About half of the states have developed a definition of substantial implementation of a SWP strategy. He noted that it is important to make some sense of the varied definitions, even if they are not approved. EPA has identified three categories of substantial implementation definitions:

- Prescribes land use protective activities, both regulatory and non-regulatory and requires implementation.

- Prescribes non-regulatory activities (such as education and/or training or outreach) as the primary protection based activity and requires implementation.
- Prescribes non-regulatory activities (such as education and/or training or outreach) as the primary protection based activity and only requires a plan in place.

Roy outlined the upcoming deadlines for various SWP reporting efforts. SWP data are due into the Agency's Annual Commitment System (ACS) on October 21, and to Headquarters for the SWP measures on October 31. The Office of Water's initial draft National Water Program Report is due on November 21, with the final scheduled to be published on December 9.

- *Will EPA provide feedback on which substantial implementation definitions meet the intent of the national reporting guidance?* No - there is no process by which EPA would approve or disapprove states' definitions. The reporting guidance does not constrain states on the definition, and it would be difficult to attain consensus of when implementation becomes "substantial."
- *Does "substantial" mean "sufficient?"* Not necessarily. The word "protection" is not included in EPA's definition of substantial implementation for this reason. Substantial implementation is not an endpoint for SWP.
  - Local staff are limited in what they can do, and the measures have no allowance for this. For instance, impervious cover and lot density restrictions can be as protective as an ordinance.
  - The concept of "land use protective activities" is very broad. The intent of this is to set an extensive goal that addresses most or all threats.
  - New Jersey lists all of the protective programs in place, which collectively cover all potential contamination sources. This assumes that all programs are in place, and the state is covered. It is hard to explain the details of implementation without local reports.
  - It is incorrect to assume that other programs are protecting public health. Rather, drinking water programs must take responsibility that SWAs are understood and that protection is happening. Drinking water staff must communicate with other programs (e.g., on underground storage tanks, pesticides, and septic). On the other hand, getting a commitment from another program to do inspections, e.g., is a big step and a good opportunity of SWP programs.
  - Public health protection is a powerful hook to make things happen. Risk reduction should be a criterion for evaluating what works. This concept applies across all programs.

- Even though states define substantial implementation differently, is it possible to have one set of criteria for what constitutes substantial implementation, e.g., paid inspectors with authority to address infractions?
- *Will the Performance Assessment Rating Tool (PART) process change next year's reporting?* It could. EPA is not entirely in charge of the goal setting process. The SDWA programs will not pass the PART without the outcome of disease prevention. Developing measures is easy; collecting the data to evaluate them is harder.
- *Isn't every corrected drinking water violation a measure of disease prevention?* This is one measure.

### ***Motivating Local SWP at the State Level***

Participants discussed ways that states can motivate locals to adopt source water protection.

- Vermont links SWP to Phase II/Phase V monitoring waivers. Given the financial constraints of most systems and the expenses of analyses, this is a powerful incentive. Assessment updates are tied to re-approval of the waivers every three years. Over 90 percent of small water systems have adopted SWP.
- Rely on the League of Women Voters and similar organizations to distribute the protection message.
- Louisiana has found that the public has a poor understanding of ground water. A leak of two gas station tanks caused the Town of Gilbert to lose their well, and tax payers in this poor town ended up paying to replace the supply. Fear can be a motivating factor. The State has developed an aquifer model to show the impacts of underground storage tank (UST) leaks.
- Tennessee created videos for children and adults that present stories from within the State to show that contamination can happen. The video is presented to commissioners and is posted on the States' web site.
- Children's water festivals can motivate kids, who then take the message home to their parents.
- Utilities typically do not have authority to pass a SWP ordinance. Providing local officials a cost assessment of losing the water supply can demonstrate the value of investing in SWP. This works especially for municipally-owned systems.

- Promote the message that zoning ordinances are designed to protect public health. Minnesota is providing templates and model language to help local staff get substance into their ordinances.
- Land use plans and economic development plans can be used to promote a community as “a good place to live and work.”
- Oregon asked the U.S. Geological Survey (USGS) to share its pesticide occurrence data. This was a powerful public education tool; many people did not realize that pesticides were in the water, or that there is no easy way to remove them. This was an incentive to initiate a monitoring program.
- Make relevant information available to county and city planners *in a way that is useful to them*. Make source water area (SWA) maps part of every one’s daily work.
- North Carolina has posted their source water assessment results on the Web, and created three state work groups to present assessment results.
- Focus limited resources where they are needed, e.g., on more susceptible systems. Protective hydrogeology should count toward attaining protection goals.

Agriculture offers unique challenges, and the group discussed ideas and experiences in working with this community.

- In Ohio, Source Water Environmental Education Teams (SWEET) do training on agricultural issues. They present maps and models to the public in agricultural communities.
- In Connecticut, preserving farms is a big issue for the state legislature. Having state drinking water staff work with state agriculture staff and using CWA section 319 funds can help.
- The New Hampshire Department of Agriculture has a \$25,000/year fund available to assist small farms with fencing and similar protective improvements. A concentrated animal feeding operation (CAFO) lagoon failure in the State, which killed 250,000 fish and resulted in a \$3.5 million fine, shed attention to the issue of how agriculture can impact water supplies.

The group discussed how local communities can work successfully with ranchers and farmers.

- Target fertilizer producers and sellers. Louisiana works with irrigation fuel tank distributors, providing fact sheets for them to distribute to farmers.

- Minnesota provides resources to its state agriculture department so that their staff (who work closely with farmers) can get messages and materials to farmers.
- Work with farm bureaus, councils of farm organizations, and others. Each offers a different “voice” to farmers. Source water programs need to dedicate staff and time to these efforts. All communications and initiatives should be sensitive to farmers’ needs and schedules.

### ***Source Water Collaborative***

Several members of the Source Water Collaborative described their perspectives on the effort. Sarah Pillsbury noted the importance of presenting the SWP in an understandable way, e.g., by adopting a social marketing approach. Jim Taft, ASDWA, mentioned that each member of the Collaborative brings their own perspective; as a result, the group now has a vision, and the first steps that can be taken now to get things moving. Vicky Binetti, EPA Region 3, mentioned the importance of communicating how activities on the land impact water quality.

Roy Simon cited three themes:

- Power to the People– the national level organizations involved, and their state counterparts, collectively represent thousands of people who can spread the SWP message.
- Power of Ideas– the Collaborative will focus on real, holistic activities.
- Power of Actions– the Collaborative needs to prioritize what it will do, e.g., researching county level issues, communication kits, and tools for citizen groups. Roy welcomed other ideas from the group.

### ***EPA Compendium of Source Water Protection Implementation Tools***

Denise Coutlakis, EPA Headquarters, presented some of the new tools available on EPA’s web site, [www.epa.gov/safewater](http://www.epa.gov/safewater). She added that Headquarters is redesigning the site, and is working to provide cross-program information, e.g., on sustainable finance, sustainable infrastructure, and watershed-based planning.

Denise asked the group for other ideas on how to effectively share information. Suggestions include: soil conservation services, [www.Healthylawnsforhealthyfamilies.com](http://www.Healthylawnsforhealthyfamilies.com), Audubon International (which certifies golf courses), the Ground Water Foundation, and cooperative extension groups. NEIWPCC offers a list serve; sign up by writing to [nswp@neiwpc.org](mailto:nswp@neiwpc.org).

New York’s Community Environmental Management (CEM) is a multi-tiered initiative that uses a variety of educational, assessment, technical and planning tools to assist communities with addressing non-point source pollution and other related environmental issues. Go to

<http://www.agmkt.state.ny.us/SoilWater/home.html>; click on Related Sites (on the left), and select Community Environmental Management.

### **Leveraging Other Programs for Source Water Protection**

Dierdre Mason presented the results of an ASDWA survey on coordination between state drinking water agencies and other (sister) state agencies. ASDWA asked drinking water staff about the sister agencies with which they work. Responses included: Clean Water Agency coordination, (e.g., national pollutant discharge elimination system (NPDES) and total maximum daily load (TMDL) programs, departments of health, and departments of environment); and multiple state agencies (for state committees and geographic information system (GIS) integration). Respondents specifically mentioned agriculture, UST, transportation, and land/soil/water conservation agencies. ASDWA also asked for examples of documents shared; these included memoranda of understanding, letters, fact sheets, brochures, and booklets. ASDWA will use the results of the survey to develop a web site/ information clearinghouse.

Mike Muse, EPA Headquarters, led a discussion on integration of SWP and other programs. Mike highlighted national level activities, and asked participants for examples of program coordination within their states.

### ***Underground Storage Tanks***

Mike mentioned that strong coordination continues between the drinking water and UST programs, including a second joint memo from Cliff Rothenstein and Cynthia Dougherty; state coordination meetings; and attention to USTs resulting from provisions of the Energy Policy Act.

- Nevada located wells and intakes, and asked their UST staff to prioritize inspections near these areas. The state UST Program refused, citing work load issues. North Carolina met with state UST, SWP, and UIC staff and received a similar response. A Federal push could help boost the drinking water programs' case.
- In Connecticut, NEIWPC was a key player in getting states and other groups together. Other players welcomed the input on how to prioritize inspections.
- Tennessee distinguishes clean up standards for drinking water and non-drinking water areas; however they have a hard time pushing on the law. EPA should promote or require better UST standards within source water areas.
- The measures to protect ground water in the Energy Policy Act are optional.

### ***Clean Water Act***

Mike mentioned that there are currently slots for two additional water quality criteria. He mentioned MTBE and perchlorate as two possibilities, and inquired about others. The following ideas were offered:

- Emerging contaminants and pharmaceuticals. One issue is to determine how to monitor for these, e.g., using surrogates, such as caffeine.
- Is there a drinking water standard for *enterococci*? Usually beaches are monitored instead.
- What about bacteria– do states have authority to require year-round standards?
- Region 4 is considering standards for ethylene dibromide and dichloroethylene. One concern is that detection limits are above risk levels.
- Triazines and atrazine compounds were also mentioned.

### ***Impaired Waters and Total Maximum Daily Loads***

Mike mentioned the use of PWSS compliance monitoring data for 303(d) lists and the work of the Office of Wetlands, Oceans, and Watersheds (OWOW) measures work group. He also updated the group on the status of a three-month effort to compile and analyze data on water quality criteria and designated uses for a sample set of 100 drinking water intakes to develop a baseline for measure SDW-16. He added that Headquarters will need the states' help in completing this analysis, and the analysis of the samples should be ready for review at the end of October 2005.

- North Carolina uses water quality data in ranking sources in its source water assessments.
- Is EPA encouraging states to do ambient monitoring in certain areas? If this data is not available, we should not count on the 303(d) process to get it.

### ***Other Integration Opportunities***

- Mike mentioned a workshop in Region 10 that brought together U.S. Bureau of Land Management (BLM), Forest Service and SWP staff to discuss common issues. The Oklahoma Corporation Commission considers wellhead protection areas when permitting oil and gas wells in the State.
- Options for addressing atrazine include regulations and agreements.

Mike asked the group for examples of enforcement actions taken to protect source water.

- Kentucky considers lands with wellhead protection areas to be unsuitable for mining. Also, agricultural users must adopt and implement best management practices (BMPs) to protect source waters. There is little compliance assurance, however.
- Tennessee may require source removal, BMPs, and monitoring to protect source water. The State's "soda straw amendment" prohibits power plants from overdrawing from drinking water sources and water supplies.

### **State Source Water Protection Funding– Needs and Opportunities**

Pete Goodmann, Kentucky Division of Water, led a discussion on funding for SWP. The discussion centered around several questions:

- What do states need to be able to continue their source water protection efforts?
- What are the barriers for states in implementing SWP activities and how have states overcome those barriers?
- What state set-aside funding options have worked for states?
- How did successful states convince their state to use set-asides for SWP?
- What funding opportunities exist for state SWP outside the set-aside?
- For what funding sources should states advocate?

Participants offered a variety of perspectives, experiences, and suggestions:

- Washington is focusing on compiling data to present to local staff in order to promote protection. They enlist the support of RWA staff on these efforts. (Kentucky relies on RWA as well).
- Washington relies on accountability. They invest in developing the data and provide it free of charge to other agencies with the understanding that, with this data in hand, these agencies are responsible for bad decisions in source water areas.

### ***What Are the Barriers for States in Implementing SWP Activities and How Have States Overcome Those Barriers?***

- CWA funds, especially Section 319, are locked up in "pet projects," and it can be difficult to make the case that SWP fits. North Carolina ended up with about \$1 million in 319 funds unspent, because many of the proposals for using the money were considered unworthy. RWA is helping locals put together good grant proposals.
- Oregon found it challenging at first to get PWSs and others to listen to the SWP message, because they did not see it as a positive program. They now see the program's usefulness

and it is easier to get them to move towards protection. GIS information is now recognized as the most important tool the program offers.

- Ohio's state ground water committee works with land management agencies and others to encourage them to develop regulations that protect source waters.
- In Washington, local, state, and federal agencies are incorporating wellhead areas into other regulations, e.g., for gravel pits.
- The Minnesota Office of the Governor's water initiative has developed interagency agreements for WHP since 1982. Agencies have the option to bail out of the agreement if they do not have the resources to continue.
- In Vermont, septics are a problem. There is resistance to oversight and upgrading of septic systems, because this can cost \$10,000 to \$30,000 per home. Kentucky echoed this concern, as it relates to septic system maintenance.
- There is not, in general a lot of good information on septics, e.g., on geology and technical issues. Oregon did a national demonstration project near Bend. They gained some good information that helped the State develop an alternative technology program.
- In Louisiana, local officials are often reluctant to ask councils for money to fund protection activities. Making SWP "free" eliminates an initial barrier to talking about protection.
- Washington is looking to tie funding for SWP to the water system, as they are the direct beneficiaries of protection. This should be considered a cost of doing business for systems.

***State Set-Aside Funding: What Options Have Worked for States, and How Did Successful States Convince Their State to Use Set-Asides for SWP?***

- It would be helpful to be able to use State Revolving Fund (SRF) set-asides for protecting surface water. Senate Bill 1400 includes re-authorization of the SDWA set-aside. The current version of the bill allows these funds to be used for surface water supplies. States should keep an eye on the progress of this bill.
- Most states are using SRF funds for WHP (about 2/3 of those present). A few are using CWA section 106 monies; and some states rely solely on state funds. One state mentioned using bottled water tax funds for SWP.
- The CWSRF is underused for land acquisition. Purchasing land can be a palatable protection option.

- Oregon uses SRF grants to supplement loans; systems may use the money for any type of project. They are working to incorporate CWSRF funds into SWP as well. The Feds allow this; however many states restrict the use of CWSRF monies.

***What Funding Opportunities Exist for State SWP Outside the Set-Aside?***

- A Washington State “sin tax” on cigarettes funds water related activities, including WHP.
- CWA Section 104 (b)(3) funds are a possible source, e.g., for septic tank upgrades.
- Rhode Island has tapped community development block grants to repair septic systems. Housing organizations are another potential source of funds.
- Programs to leverage include: Farm Bill, the Conservation Preserve Program, CWA Section 319 and combined sewer overflow/storm sewer overflow (CSO/SSO) funds, green space funding, Homeland Security, and private foundations (e.g., Trust for Public Lands or River Network).
- Hunting groups, e.g., Ducks Unlimited, may be tapped to help balance needs for hunting lands and fecal coliform loading concerns.

***For What Funding Sources Should States Advocate?***

- The group agreed that GWPC and the states should support opening the set-aside funds for protection of surface water supplies.
- Encourage local funding of SWP. For example, city councils should build SWP education into their budgets, even if it is only a nominal amount. This would help keep source water education on planners’ minds.

**Final Thoughts and Next Steps**

EPA noted that SWP state and regional staff should be on the lookout for upcoming USGS reports on VOC and SOC occurrence; and pending drinking water rules, including the Ground Water Rule and the Long-Term Enhanced Surface Water Treatment Rule (LT2). Staff should also check EPA’s web site for various documents, e.g., on septic systems.

GWPC, ASDWA, and EPA all stressed the importance of continuous emphasis on the importance of SWP during the wrap-up session. States were encouraged to talk within their offices and with their clean water counterparts about the issues discussed in the work shop. States were also encouraged to work with the state-level partners in the Source Water Collaborative so that the work of the states could be leveraged by the efforts of the various Collaborative members groups.

The GWPC/ASDWA Steering Committee will explore next steps for future work shops and for state participation in the Source Water Collaborative. Additional workshops may be held in conjunction with future GWPC or ASDWA annual meetings. Participants noted that state staff in other (non-drinking water) programs should be invited to future workshops. Along the same vein, it was noted that building a stronger relationship with the Association of State and Interstate Water Pollution Control Agencies (ASIWPCA) on source water issues is a key way to boost integration of CWA and SDWA efforts.