



2011 Workgroup Activity Report and 2012 Workgroup Priorities

Potomac River Basin Drinking Water Source Protection Partnership
Annual Meeting – October 4, 2011

Early Warning and Emergency Response

This workgroup is intended to better prepare the Partnership's member utilities to respond in the event of a spill or other incident that affects their water supplies. The workgroup also will open dialogs with emergency response agencies and with operators/owners of significant hazardous waste sources to improve the mutual understanding of water supply vulnerabilities and emergency response preparedness.

Activities Completed in 2011

- Held two in-person meetings with Colonial Pipeline with the dual purpose of improving Colonial Pipeline's understanding of the high consequences to water supply from a pipeline spill within the metro Washington area utilities' service area and DWSPP members' understanding of Colonial Pipeline's integrity management program and their spill response plan. Additional meetings and communication are planned as follow-up to these two successful events. The Metropolitan Washington Council of Governments is assisting with this effort. **(Achieves 2011 objective)**
- The EW/ER workgroup has begun planning for a spill exercise to be held in winter/spring of 2012, with funding support from the U.S. EPA. Assistance for this exercise will be provided by Horsley Witten, the same firm that assisted with the 2008 DWSPP spill exercise. **(Achieves 2011 objective)**
- Opened lines of communication with the Coast Guard Area Committee, the group of government agencies that respond to emergency events such as spills. The EW/ER workgroup is now on their interested parties list and EW/ER members have attended to Area Committee meetings and drills.
- Assisted the Utility Committee in drafting comments to the U.S. Department of Transportation on the Pipeline and Hazardous Materials Safety Administration's Advance Notice of Proposed Rulemaking (ANPRM) on the Safety of On-Shore Hazardous Liquid Pipelines. Letters were also sent to the U.S. Environmental Protection Agency and U.S. Department of Homeland Security, encouraging the consideration of source water protection when reviewing pipeline safety rules.

2012 Work Plan

1. Continue communications with Colonial Pipeline to learn more about the company's integrity management program.
2. Hold at least one spill exercise to test communications and related spill response.
3. Prior to the spill exercise, test and refine, where necessary, communication procedures between ICPRB, RICCS, and WARN systems; utilities; and government agencies so that we are prepared to get the most benefit from the EPA/Horsley Witten spill exercise.
4. (An aspirational goal) In conjunction with the Government Committee's outreach efforts, reach out to more upstream utilities to include them in EW/ER coordination.

Reaching Out

The Reaching Out workgroup (ROW) informs and educates the public and water professionals about DWSPP activities and initiatives, supporting the activities of the other workgroups. The ROW also produces materials and conducts outreach activities to help move DWSPP toward its goals. The group can also help to attract new membership and input to DWSPP. Much of the group's work is continuous in nature.

Activities Completed in 2011

- Served as a resource for reporters on the impacts of road salt and deicing chemicals on source waters during this year's large snow events.
- Maintained the Partnership's website. **(Achieves 2011 objective)**
- Presented to and held meetings with outside organizations interested in the Partnership's efforts, including at presentations ICPRB made to several international delegations. **(Achieves 2011 objective)**
- Prepared 2010 Annual Report.
- Helped to organize the annual meeting.
- Kept membership informed of news items and other information.

2012 Work Plan

1. Discuss recruitment of new members, especially smaller, upstream systems and/or groundwater systems.
2. Coordinate with various Partnership workgroups to maintain and upgrade Partnership web presence.
3. Continue to pursue contact with other federal agencies having mutual interests in the Potomac watershed.
4. Continue to promote DWSPP during ICPRB water resources outreach efforts.
5. Produce 2011 Annual Report.
6. Produce outreach and educational materials needed by the membership.

Agricultural Issues

The Agricultural Issues (Ag) workgroup was formed to take an active role in building alliances with the agricultural community in order to minimize water pollution in the region's sources of drinking water. The Ag workgroup will work primarily with state and local academic institutions and agencies that can provide technical, extension, and veterinarian support. One of the Partnership's founding workgroups, the Pathogen's group, identified Cryptosporidium as the most significant pathogenic public health threat to water suppliers in the Potomac. After the completion of the Cryptosporidium Source Tracking Project in 2008, which identified the significant sources of Cryptosporidium in the basin, the Pathogen and Ag workgroups worked together to develop an educational outreach initiative to raise awareness of the links between agriculture, Cryptosporidium, and drinking water.

The Agricultural workgroup's central focus is on Cryptosporidium and developing a message to convey the importance of preventing this pathogen from entering source waters. However, the workgroup's interests extend to the prevention of other difficult-to-treat drinking water contaminants (e.g. Phosphorus, pesticides, and pharmaceuticals) from agricultural land as well. One of the workgroup's main challenges is to determine the most effective methods to engage the agricultural community. The Ag workgroup's long term plans include continuing to help the Partnership better communicate drinking water needs in the Potomac River basin and to promote implementation of improved source water protection practices in agricultural areas.

Activities Completed in 2011

- Conducted and recorded second "Cryptosporidium, Cattle & Drinking Water" webinar (March 9, 2011).
- Advertised live and pre-recorded webinar locally and nationally.
- Conducted an informative thirteen-question survey of webinar and reviewed feedback from participants.
- Followed up with journalist, providing technical information for article on Crypto in *Lancaster Farming*.
- Explored Potomac land preservation possibilities.
- Created poster on *Crypto* source-tracking RARE project.
- Worked on updating DWSPP's Strategic Plan, including adding language on the Ag Issues workgroup.

2012 Work Plan

1. Develop draft outreach strategy for Ag Issues workgroup.
2. Coordinate with the Ag Advisory Committee to finalize the workgroup's outreach strategy.
3. Look for outreach opportunities at existing workshops and ag events in the basin.
4. Identify common issue areas with the Emerging Contaminants workgroup where efforts could have synergistic benefits.

Emerging Contaminants

The role of the Emerging Contaminants workgroup is to support the Partnership by tracking and reporting on findings of research and monitoring of persistent and newly identified threats posed to source water quality in the Potomac River basin. A primary focus of the workgroup shall be on endocrine disrupting chemicals (EDCs), pharmaceuticals and personal care products (PPCPs), and on other chemicals or contaminants of concern – specifically, their identity, sources, distribution, possible human and ecological health effects, treatability, and control through management practices to limit their occurrence in the Potomac River and its tributaries.

Activities Completed in 2011

- Tracked chemical regulation initiatives. The Endocrine-Disrupting Chemicals Exposure Elimination Act of 2011 was introduced in the U.S. Senate and House of Representatives. The bill proposes to set up a research program to investigate up to ten potential endocrine disrupting chemicals (EDC) per year and possibly ban those most harmful to public health unless human exposure is mitigated. The workgroup continued to track information on various federal and state legislative efforts related to safe drug disposal and emerging contaminant research. The federal Safe Drug Disposal Act was signed into law in fall 2010 and rulemaking is currently underway. **(Achieves 2011 objective)**
- Worked with the Government Committee and EPA Region 3 and Headquarters to support several of the participating locations in the Drug Enforcement Administration's National Take-Back Day on April 30, 2011. **(Achieves 2011 objective)**
- Workgroup members continued to participate in Water Research Foundation project 4169, "Water Utility Framework for Responding to Emerging Contaminant Issues." A workshop was held in Maryland on June 10, 2011 with the intent of soliciting feedback from DWSPP members. In July, the consultant team released a draft framework web-tool (series of interlinked web pages and related documents) for beta-testing. The outcome of the project to date does not fully meet the original expectations of many members. **(Achieves 2011 objective)**
- Periodically updated the Partnership website with upcoming conferences, symposia, seminars, workshops, and webcasts. In addition, members reviewed and added content for a new web page to address proper pharmaceutical disposal. **(Achieves 2011 objective)**
- Efforts to identify pharmaceutical manufacturing plants in the basin commenced using EPA data on NPDES permits. Pre-treatment schemes and multiple standard industrial classification codes for pharmaceutical plants have complicated the process. A workgroup member has acquired data on all permitted dischargers in the basin that could be used for various reasons including the identification of any pharmaceutical-related facilities. **(Partially achieves 2011 objective)**
- Several workgroup members participated in a utility-focused workshop for Water Research Foundation project 4323, "Customer Perceptions of Endocrine Disrupting Compounds (EDCs) and Pharmaceuticals and Personal Care Products (PPCPs) in Drinking Water," held in June 2011 in Washington, D.C. **(Achieves 2011 objective)**
- Three workgroup members attended an Emerging Contaminant Forum sponsored by PA DEP in Harrisburg on March 24, 2011 which included four presentations on the occurrence of emerging contaminants, impacts on aquatic life and innovative treatment methods. **(Achieves 2011 objective)**
- Several workgroup members continued to track issues related to hydraulic fracturing of the Marcellus Shale to stimulate gas production. Concerns exist over the volumes of wastewater produced, its treatment, and contaminants contained in water that could be discharged after use. Regulatory efforts in several states (PA, MD, NY) to limit discharge impacts or halt exploration pending further study were reviewed. Members also considered a Draft Environmental Impact

Statement prepared by the U.S. Forest Service supporting a revised Land Use and Resource Management Plan for the George Washington National Forest. The Plan includes a proposed ban on horizontal drilling (the main method associated with hydraulic fracturing) but allows conventional vertical drilling for gas exploration and production under existing mineral rights, leases, or licenses.

- Members worked intermittently over several months to update the EC Workgroup Strategic Plan.
- Several members attended an EDC forum “Disruption: New Pollutants in the Potomac and Beyond” sponsored by the Potomac Conservancy in Washington, D.C. on June 3, 2011. A wide range of perspectives from eight speakers included research, environmental health, risk assessment, regulation and water treatment. Washington Aqueduct GM Tom Jacobus was one of the speakers.
(Achieves 2011 objective)

2012 Work Plan – 2012 priorities appear in **BOLD**.

Pharmaceutical Disposal and Waste

1. **Determine the location of pharmaceutical manufacturing facilities within the basin as they have recently been identified as major sources of pharmaceuticals in the wastestreams sent to sewage treatment plants. Develop a map of these locations. Consider contacting and/or meeting with the manufacturers to discuss possible source water protection efforts.**
2. Coordinate with the Reaching Out workgroup and the Government Committee on safe medicine disposal outreach and/or promoting national and regional take-back events.
3. Track significant legislative efforts related to safe drug disposal for applicability within jurisdictions in the Potomac River basin.

Emerging Contaminant-Related Regulation

4. Monitor the development of EPA’s proposed Drinking Water Strategy especially the items on regulating contaminants as groups and innovative technologies to address health risks from a broad suite of chemicals.
5. **Track new efforts by the federal government to transform the way that industrial chemicals are regulated (Safe Chemicals Act, EDC Exposure Elimination Act) with the goal of drafting a statement or white paper in coordination with national organizations.**

Water Research Foundation Projects

6. **Continue participation in the ongoing Water Research Foundation research project 4169, Water Utility Framework for Responding to Emerging Contaminant Issues, to ensure the project provides a valuable tool for water utilities and the Potomac Partnership.**
7. Track Water Research Foundation projects related to emerging contaminants and, when needed, propose in-kind or cash support to facilitate them.

Emerging Contaminant Research

8. Continue tracking research on emerging contaminants by reviewing academic, industry, and government publications and reports and by attending conferences, seminars, symposia, workshops, and webinars.
9. Track, support, and participate in emerging contaminant monitoring programs that may be undertaken by government agencies or utilities, if of value to the Partnership.

Communications

10. Support the Reaching Out workgroup in its efforts to update the Partnership’s website and to develop public communications tools for responding to emerging contaminant issues.

11. Periodically update and post the list of upcoming conferences, webinars etc. on the Partnership website.
12. **Begin planning for an Emerging Contaminant workshop for Partnership members to be held in 2013.**
13. Identify common issue areas with the Agricultural Issues workgroup where efforts could have synergistic benefits.

Urban Issues

This workgroup is intended to position the Partnership to better communicate drinking water needs in the Potomac River basin to the agencies who oversee implementation of point and non-point source discharges of urban runoff, including Municipal Separate Storm Sewer (MS4) programs. These agencies may include state agencies, local jurisdictions, or regional planning districts or planning commissions. This workgroup shall focus on urban stormwater including urban and highway runoff and other point and non-point discharges associated with storm activity. The goal of this workgroup is to promote implementation of better stormwater management and better integrate Clean Water Act and Safe Drinking Water Act water quality programs to protect sources of drinking water in the Potomac. The workgroup's activities include ongoing efforts to evaluate the impact of road deicers and salts on the Potomac. The workgroup will periodically update information on urban land use trends and on current stormwater management practices throughout the basin. This workgroup will also develop and maintain a list of recommended urban stormwater practices to be used for advocacy throughout the watershed.

Activities Completed in 2011

- Organized an information session on "Identifying Source Water Protection Opportunities in the Chesapeake Bay Watershed Implementation Plans," which was held following the April quarterly meeting. **(Achieves 2011 objective)**
- Engaged in discussions with groups from other parts of the country that train snow plow operators on environmental and source water protection issues to generate interest in developing nationwide deicing operator training/certification programs. **(Achieves 2011 objective)**
- Worked on preparing a webinar presentation on the environmentally sensitive application of deicing materials and the potential benefits for source waters. **(Achieves 2011 objective)**
- Continued tracking of regional programs and initiatives that may impact urban source water protection efforts in the Potomac basin, including the Chesapeake Bay TMDL, State Watershed Implementation Plans, and Clean Water Act Reauthorization for the Chesapeake Bay Program. **(Achieves 2011 objective)**

2012 Work Plan

1. Present updated information on land use changes and trends in the Potomac basin and how this may be impacting source water quality. The plan is to build on the data and information that ICPRB and state agencies already have available.
2. Update and maintain a comparison of stormwater management requirements in the Potomac River basin.
3. Present deicing webinar to interested stakeholders and make the webcast publically available on the web and actively promote the webinar.
4. Identify a Watershed Implementation Plan Phase 2 project with significant source water benefits to actively champion.

Disinfectant By-product Precursors

Disinfection-by-products (DBPs), generated when a disinfectant such as chlorine reacts with organic matters (the precursors) in water, are considered potential carcinogens and are strictly regulated under the Safe Drinking Water Act. The current practice takes the precursors as a given and attempts to lower the DBP formation via treatment steps. This workgroup proposed that limiting precursors in raw water, via source water protection, may provide another option for limiting DBPs in finished water.

Activities Completed in 2011

The workgroup continues to track Water Research Foundation projects that are investigating the significance of land and water based DBPs precursors for controlling DBPs in drinking water. Two water utilities came up with considerable funding to support Water Research Foundation studies in their watersheds. The first project, being conducted by the University of Colorado and the City of Fort Collins, Co., aims to characterize the source of organic matter that contributes to DBP formation, primarily focusing on the land based sources of DBP precursors. Another group, led by U.S. Geological Survey, focuses on investigating water-based organics, as well as developing techniques to rapidly identify the characteristics of organic matter in a reservoir to better control DBPs. The WSSC is participating in both projects in an advisory role. Per our recommendation, the two teams have included treatability studies in their scope of work, with the goal of steering them to produce practical tools for DBP control. The total budget for these two projects is \$653,490, with \$230,000 provided by the Water Research Foundation and the remaining \$423,490 by those who proposed the projects. The projects are anticipated to be completed by 2012.

Future Activities

The DBP workgroup will continue to be involved in and monitor the progress and findings of these two projects in order to assess their applicability to our region and to determine if any additional projects may be needed for the Partnership.