Potomac River Basin Drinking Water Source Protection Partnership
Strategic Plan Progress Review

October 2010

Mission Statement (updated 2009)

To serve as a cooperative and voluntary partnership working toward the goal of improved source water protection within the Potomac River basin in recognition of the vital role of the river and its tributaries in supplying drinking water to millions of people and in support of the multi-barrier approach to safeguarding drinking water supply for public health.

Partnership Objectives

- Identify regional priorities for source water protection efforts.
- Coordinate, where appropriate, source water and drinking water protection efforts to benefit multiple water systems.
- Establish and maintain a coordinated dialogue between water suppliers and government agencies involved in drinking water source protection within the Potomac River Watershed.
- Establish and maintain a coordinated dialogue between the Partnership agencies and other groups working towards watershed protection within the Potomac River Watershed.
- Promote information sharing among groups working on, and affected by, safe drinking water issues.
- Enhance coordinated approaches to water supply protection measures in the Potomac basin, especially for boundary waters and for project planning that impacts interstate waterways.
- Develop new initiatives within the drinking water community and with partners that will fill program voids ensuring higher quality drinking water supplies.

Pathogens

This workgroup will provide the Partnership with information on pathogens which may affect the raw water supplied by the Potomac River and its tributaries. The workgroup will seek to understand the sources of pathogens in the Potomac watershed and methods for controlling their introduction into the water supply. The workgroup will try to create alliances with other stakeholders in developing a plan to reduce pathogen loads in the river.

Workgroup Objectives

A1) Develop an understanding of the possible sources of *Cryptosporidium* in the Potomac watershed, especially *Cryptosporidium parvum*. **{COMPLETE}**

A2) Evaluate the available methods for identifying and characterizing the actual sources of *Cryptosporidium i*n the Potomac watershed. **{COMPLETE}**

A3) Compile information on pathogens data in the Potomac basin including identification of watersheds that contribute significant loadings of *Cryptosporidium* to the main stem of the river (upstream of Little Falls). **{PARTIALLY COMPLETE}**

A4) Develop a strategy to incorporate stakeholders and communities in a plan to reduce pathogens in the Potomac River, including the agricultural community. **{COMPLETE}**

Workgroup Activities

Short term:

- Conduct GIS mapping of intake locations and possible sources of pathogen contamination including combined sewer overflows, wastewater treatment plants, and agricultural operations from existing databases. **{PARTIALLY COMPLETE}**
- Review current field studies on *Cryptosporidium* sources. Investigate the best available methods for source identification. **{COMPLETE}**
- Conduct workshop on pathogens, focusing on *Cryptosporidium*. **{COMPLETE}**

Long term:

- Develop proposal for more detailed study of areas that are likely sources of pathogens. **{NOT YET PURSUED}**
- Contact stakeholder communities to develop a plan to reduce pathogens in the Potomac River. **{NOT YET PURSUED}**

Workgroup Measures of Success:

- Conduct pathogens workshop. **{ACHIEVED}**
- Create database and mapping of potential pathogen sources. **{ACHIEVED}**
- Identify best candidate methods for field and laboratory studies to characterize pathogen sources, and in particular, sources of *Cryptosporidium*. **{ACHIEVED}**
- Develop scope of work for future research. **{ACHIEVED}**

Additional Projects

2005: One-day pathogen workshop focused on *Cryptosporidium*

Contacted state agencies to obtain animal populations data for determining hotspots in the watershed.

2006: Submitted USDA National Research Initiative (NRI) grant - Submitted in January 2006; notified that grant was not approved in September 2006.

EPA RARE grant - Project approval received in February 2006

Develop a sampling plan for Cryptosporidium in the Potomac River watershed. - Partially completed through source tracking project

Evaluate the available methods for identifying and characterizing the actual sources of cryptosporidium in the Potomac watershed. - Completed through the source tracking project

2007: Carried out the EPA RARE grant.

2008: Completed crypto monitoring and report the finding

Established a dialogue with state agriculture agencies and cattle operator association regarding BMPs and stream fencing - partially completed through Ag workshop.

Held Ag 101 workshop.

Toured dairy and beef cattle farms.

Completed *Cryptosporidium* source tracking report.

2009: Reviewed literature and talked with researchers about effectiveness of specific BMPs in reducing *Cryptosporidium* from agricultural runoff.

Organize meeting of Partnership members, with assistance from an external advisory group (made up of representatives from Natural Resources Conservation Service (NRCS) , universities, state agencies, Soil and Water Conservation Districts (SWCDs), private sectors), to develop a strategy for addressing Crypto. (On-going)

2010: Supported the Ag workgroup to address Cryptosporidium as necessary.

Assisted with *Manure du Jour* webinar in July 2010.

Disinfectant By-Product (DBP) Precursors

This workgroup is intended to develop better information for Partnership utilities to address disinfection byproducts issues from a source water protection approach. This workgroup shall focus on prioritizing and conducting research to assess the relative contribution of different watershed sources (i.e., land-based/allochthonous vs. in-river/autochthonous) of natural organic matter/DBP precursors to treated/distributed water DBP levels. The goal of this workgroup is to focus source water protection efforts on those sources most significant to DBP levels in treated/distributed water and to identify the most feasible and cost effective source water protection measures. The initial steps include identifying priority research and partners as well as preparing technical proposals and obtaining funding. The research findings will then be used to identify the significant contributing sources in the watershed and to assess whether source water protection measures targeted at these sources would be feasible and cost-effective. This workgroup will develop recommendations for source protection measures to address regional utility DBP issues.

Workgroup Objectives

C1) Identify significance and nature of DBP concerns for specific Potomac River water utilities and, if possible, prioritize sources of DBP precursors. **{ON-GOING}**

C2) Identify priority research regarding relative source contributions of DBP precursors (i.e., how much of the DBPs in treated water can be attributed to allochthonous/land vs. autochthonous/algae sources). **{ON-GOING}**

C3) Obtain funding to perform priority research on relative source contributions of DBP precursors in the Potomac. **{PARTIALLY COMPLETE}**

C4) Recommend measures for source water protection activities. **{NOT YET PURSUED}**

Workgroup Activities

Short term:
- Perform literature review and develop draft scope of work for priority research regarding relative source contributions of DBP precursors. **{COMPLETE}**
- Identify potential research partners and funding sources (grants, in-kind services, etc.). **{COMPLETE}**
- Coordinate efforts with on-going research work for Washington Aqueduct Division of the U.S. Army Corps of Engineers. **{NOT YET PURSUED}**
- Obtain information from state agencies to identify which systems on the Potomac may have DBP issues. **{NOT YET PURSUED}**

Long term:
- Oversee and coordinate research efforts on successful grants. **{PARTIALLY COMPLETE}**
- Continue to collect information from related research efforts for other sources as appropriate. **{ON-GOING}**
- Identify primary targets for source protection based on research findings. **{NOT YET PURSUED}**

Workgroup Measures of Success

- Identify DBP issues. **{PARTIALLY COMPLETE}**
- Identify priority research in detailed scope of work. **{PARTIALLY COMPLETE}**
- Development of grant and funding applications. **{PARTIALLY COMPLETE}**

Additional Projects

2005: Held subcommittee meetings to develop framework for studies.

A literature review was initiated by the subcommittee to find relevant studies on the issue of relative contributions of different DBP precursor sources within watersheds and their fate and transport through the watershed and treatment plant.

2006: Finalized framework of research plan/proposal for determining relative DBP precursor source contributions and identified funding sources/research partners.

2008: Pursued a Tailored Collaboration project with AwwaRF on the relative contributions of watershed vegetation and algae to DBP levels in finished water for several Potomac WTPs. Project not selected.

2009: Contacted appropriate organizations and volunteered to serve as case study for potential 2009 WRF project on watershed sources of DBP precursors. Project not selected.

Organized Potomac River utilities to serve as participating utilities and regional case study in proposed 2009 WRF project #4245 (Effect of Terrestrial and Aquatic Sources of Precursors on Disinfection By-Product Formation and Control Formation). Project not selected.

2010: Pursued funding approval by the Water Research Foundation for the first phase of the study entitled, Impacts of Coagulation-Sedimentation and Precursor Types on Disinfection Byproducts Formation, and support the study if it is funded. Project not selected.

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 the Potomac River drinking water supply. An initial focus of the workgroup shall be on endocrine disrupting chemicals(EDCs). The workgroup's short-term goals include defining and prioritizing EDCs based on a review of current knowledge and consultation with experts, assessing potential sources for the priority EDCs in the Potomac River, and identifying appropriate best management practices for their control. The workgroup's long-term goal is to enhance, through monitoring of ongoing research by others, the Partnership's and local stakeholders' understanding of EDCs identity, sources, distribution, possible human and ecological health effects, treatability, and management practices to limit their proliferation in the environment

Workgroup Objectives

B1) Define and prioritize emerging contaminants; modify and amend as new data are reported. Focus initially on contaminants that are or have potential to be endocrine disrupting and that have already been observed in rivers or ground water used for water supply. **{ON-GOING}**

B2) Monitor research on detection methods, surrogate indicators, human and ecological/environmental health effects, and epidemiological/toxicological studies. **{ON-GOING}**

B3) Identify potential sources (point source and non-point source) of identified priority emerging contaminants. **{ON-GOING}**

B4) Identify patterns of contaminant distribution and persistence, especially downstream of identified point sources. **{NOT YET PURSUED}**

B5) Provide information to the Partnership on any observed effects in river biota in the areas of contamination. **{PARTIALLY COMPLETE}**

B6) Identify control measures and best management practices to reduce or minimize proliferation of emerging contaminants in the Potomac River. **{ON-GOING}**

B7) Develop a communication strategy to educate stakeholders on control measures and best management practices. **{PARTIALLY COMPLETE}**

Workgroup Activities

Short term:

- Identify and contact interested agencies and individuals to facilitate non-duplicative coordination of efforts and communication of unpublished research; survey interested parties to assess what resources are already available. **{PARTIALLY COMPLETE/ON-GOING}**
- Develop a GIS of potential contaminant source locations. **{NOT YET PURSUED}**
- Conduct workshop on issues relating to emerging contaminants that are relevant to the Potomac Basin. **{COMPLETE}**

Long term:

- Track ongoing research to identify and detect priority emerging contaminants, and track ongoing research on human and ecological/environmental health effects of exposure to specific substances; track progress in understanding which substances are responsible for observed wildlife effects. **{PARTIALLY COMPLETE/ON-GOING}**
- Prepare a brief annual literature survey summary/newsletter to track the state of research; when feasible, attend local and national conferences, symposia and seminars on relevant topics. **{ON-GOING}**
- Approximately every 5 years sponsor a seminar or workshop on current research. **{PARTIALLY COMPLETE/ON-GOING}**
- Identify funding sources and resources needed to support monitoring. **{NOT YET PURSUED}**
- Provide information on the effectiveness of biological indicators for potential harmful effects of human consumption of source water. **{NOT YET PURSUED}**

Workgroup Measures of Success

- Listing of identified priority emerging contaminants to be monitored. **{NOT YET PURSUED}**
- Preliminary GIS layer(s) showing potential sources (point and non-point). **{NOT YET PURSUED}**
- Initial literature survey of research progress. **{ACHIEVED}**
- Conduct emerging contaminants workshop. **{ACHIEVED}**

Additional Projects

2005: Workshop on emerging contaminants and water supply

2007: Reviewed USGS research report containing results of a reconnaissance of emerging contaminants in upstream waters of the Potomac River basin and in fish plasma. Prepared a summary and offered comments, emphasizing its stated intent as a study of contaminant occurrence only. The workgroup also recommended further studies to examine contaminant fate and transport, distribution patterns, and human health and ecological health effects.

Convened a workshop on Emerging Contaminant Challenges – Alternative Approaches for Water Utilities

Tracked research on contaminants of emerging concern, by attending conferences and symposia, reviewing publications and research reports, and by contacting researchers directly.

2008: Using the information from the foregoing resources, the workgroup prepared a comprehensive compilation of information about EDCs and PPCPs. A first draft in "frequently-asked-questions" format was circulated to both EC and Reaching Out workgroup members.

2009: Updated EC Workgroup webpages, adding relevant links to other websites including individual utilities, WRF, USGS, and also links to workgroup review summaries.

Drafted comments on the Drug Enforcement Administration's request for input on the disposal of controlled substances by persons not registered with DEA. Submitted by ICPRB on behalf of the Partnership.

Utility members of the workgroup drafted comments to an EPA Information Collection Request regarding a Questionnaire for Drinking Water Utilities Participating in Emerging Contaminant Sampling Program. Comments were submitted by the Metropolitan Area Utility Source Water Protection Committee.

Some members helped organize an educational event in Frederick County, MD, on proper disposal of medicines.

2010: Worked with EPA and others to organize three take back events in conjunction with the nationwide Drug Enforcement Administration take back initiative.

Sponsored a EPA "listening session" on the EPA's new Drinking Water Strategy.

On-going: Support the Reaching Out workgroup in updating the Partnership's website and developing public communications tools for responding to emerging contaminant issues. The development of a communications tool to respond to emerging contaminant issues has not been started. This is the focus of a WRF project and the workgroup will wait for the results of the project before acting.

Track new efforts by the federal government to transform the way that industrial chemicals are regulated with the goal of drafting a statement or white paper. Tracking is an on-going effort. In 2010, tracked the Safe Chemical Act of 2010. A white paper is likely not possible, but letters in support of legislation may be.

Track significant legislative efforts related to safe drug disposal for applicability within the Potomac basin.

Track WRF projects related to emerging contaminants and, when needed, propose in-kind or cash support to facilitate them.

Track, support, and participate in emerging contaminant monitoring programs that may be undertaken by government agencies or utilities, if of value to the Partnership.

Periodically update list of upcoming conferences, symposia, seminars, workshops, and webcasts.

Participate in the upcoming WRF research project #4169, Water Utility Framework for Responding to Emerging Contaminant Issues, to ensure the Potomac case study is prominent and successful.

Early Warning Monitoring/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 will evaluate the need for an early warning monitoring system for the Potomac River and its tributaries and help to coordinate the development of needed components of such a system. The workgroup will also assist in the development of an emergency response plan to improve communication among all affected utilities in the event of a water supply emergency.

Workgroup Objectives

D1) Ensure that an emergency communications system and protocol reflecting the specific needs of the water supply community is in place and understood. **{ON-GOING}**

D2) Investigate the feasibility of establishing an enhanced monitoring system and a data sharing network.

D3) Establish liaison with petroleum pipeline industry and identify needs to develop liaisons with other industries. **{ON-GOING}**

Workgroup Activities

Short term:

- The Metropolitan Washington Council of Governments (MWCOG) has developed the Regional Incident Communication and Coordination System (RICCS) to facilitate communications in the event of emergencies. RICCS allows registered users to notify others of significant events through a centralized system that delivers messages to email addresses, cell-phones, and pagers. For most types of emergencies, the RICCS system is confined to the immediate Washington, D.C. metropolitan area (D.C. metro area) that includes MWCOG's member jurisdictions. However, because of the upstream-downstream connection of the Potomac River and its tributaries as the area's water supply source, the DWSP Partnership will work with MWCOG to enroll Partnership members in the RICCS water group regardless of their location. **{IN PROGRESS}**
- The Partnership will create a one-page summary of emergency communications procedures for distribution to water utilities. The protocol will reflect the emergency plan developed for the DC metro area by MWCOG, with any needed modifications to accommodate the larger coverage of the Partnership. **{COMPLETE}**

Long term:

- An enhanced water quality monitoring system can provide early warning of contamination events before the materials reach water supply intakes. The Partnership will investigate the feasibility of developing an enhanced monitoring system. **{ON-GOING}**
- Water utilities already collect a great deal of water quality data as part of their normal operations. Sharing of this data amongst the many utilities sharing the Potomac River and its tributaries as their source can benefit operations. The Partnership will investigate the feasibility of developing a real-time data sharing network amongst the water utilities of the Partnership. Monitoring data from the United States Geological Survey (USGS) gages can also be included in this network to complete the early warning monitoring system.
- Establish contacts with petroleum pipeline industry and other industries as needed. **{ON-GOING}**

Workgroup Measures of Success

- Increase participation of upstream water utilities in the RICCS system. **{IN PROGRESS}**
- Distribute concise emergency communication procedures. **{ACHIEVED}**
- Provide status report to the Partnership on the feasibility of developing an early warning monitoring system and data sharing network. **{IN PROGRESS}**
- Establish contact with petroleum industry. **{IN PROGRESS}**

Additional Projects

2004: Held half-day seminar on early warning systems.

2005: Drafted a one-page summary of emergency procedures, outlining the communications plan should an event threaten Potomac River water supply. This summary is based largely on the MWCOG water emergency plan, and is pending finalization of that document.

Drafted emergency contact list.

Compiled a list of monitored parameters at each member water supplier.

Monitored the progress of MWCOG projects related to water security.

Wrote a proposal to install monitoring equipment at Whites Ferry.

2006: Evaluation of RiverSpill Model/Spill Exercises.

Updated emergency procedures and contact list.

2007: Initiated a pipeline safety review for the Potomac River basin.

Initiated contact with Colonial Pipeline.

Maintained a summary of emergency procedures, based largely on the MWCOG water emergency plan, outlining the communications plan should an event threaten Potomac River water supply. The list of emergency contacts for water utilities and government agencies, included in this plan, was updated.

ICPRB, MWCOG, and SAIC prepared a proposal to update the Potomac spill model to ICWater (Incident Command Tool for Protecting Drinking Water), calibrate with site-specific time-of-travel data, including new data from USGS, update/verify emergency contact information for upstream intakes, and conduct additional spill exercises

2008: Coordinated the Potomac River Spill Tabletop Exercise.

2009: Transmitted updated water supply intake locations to Colonial Pipeline.

Created a one-page information sheet on Potomac Basin spill notification procedures.

Initiated further discussion with the EPA Region 3 on-scene coordinator regarding Incident Command Structure in the event of a spill emergency that has a water supply impact

2010: Reviewed spill exercise after-action report by Horsley-Witten and tracked completion of recommended actions.

Updated contact information for "Interstate Notification & Time-of-Travel Estimates for Spills in the Potomac River Basin"

Conducted spill notification exercises.

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 urban stormwater management 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 runoff, combined sewer overflows, and sanitary sewer overflows associated with storm activity. The goal of this workgroup is to promote implementation of better stormwater management to protect drinking water in the Potomac. The initial steps include gathering information on urban land use trends and on current stormwater management practices throughout the basin. After this has been completed, priority communities will be identified and a dialogue started with those communities. This workgroup will develop a list of recommended urban stormwater practices to be used for advocacy throughout the watershed.

Workgroup Objectives

E1) Improve communication between appropriate urban stormwater agencies to both educate Partnership members on urban stormwater issues in the Potomac River Basin and to educate agencies on drinking water concerns. **{IN PROGRESS}**

E2) Advocate for implementation of management practices that will better protect drinking water in the Potomac River Basin. **{IN PROGRESS}**

E3) Support relevant agencies in obtaining funding to implement projects where applicable. **{NOT YET PURSUED}**

Workgroup Activities

Short term:

- Investigate and report on projected trends of urban areas in Potomac River Basin. Obtain currently available information on projected land use, specifically focusing on urban and suburban areas. **{COMPLETE}**
- Characterize currently established stormwater management requirements in the Potomac River Basin. Obtain information from state stormwater agencies to characterize how stormwater is managed within various areas of the Potomac River Basin. **{COMPLETE}**
- Prioritize communities with which to begin dialogue. A small number of communities should be identified as priorities, based on proximity, density, potential for protection, or other parameters. **{COMPLETE}**
- Investigate best management practices regarding use of deicing chemicals. Appropriate agencies will be contacted to determine what kinds of chemicals are used, whether there are alternatives that may reduce the risks to water supplies, and whether there are best management practices that can be applied to improve water quality. **{COMPLETE}**

Long-Term:

- Meet with priority jurisdictions to begin dialogue and exchange information. The purpose of the initial meetings will be to inform the jurisdictions about the Partnership goals, and educate the Partnership members on stormwater issues for those communities. **{NOT YET PURSUED}**
- Develop recommendations for urban stormwater management in coordination with state agency stormwater staff. **{IN PROGRESS}**
- Advocate for implementation of recommended stormwater practices. **{NOT YET PURSUED}**
-

Workgroup Measures of Success

- Provide presentation to Partnership on trends and priorities. **{IN PROGRESS}**
- Develop recommendations for stormwater management practices. **{NOT YET PURSUED}**

Additional Projects

2006: Reviewed of stormwater management programs and regulations.

Held Urban Stormwater Dialogue session.

Scope of work to design and install one or more urban stormwater best management practices that will reduce sediment and/or phosphorus loading to the Potomac River upstream of the Metro area utilities.

Developed status/summary report on stormwater management requirements and practices in the Potomac River basin, based on a level of service or similar approach. Investigated projected urban trends in the Potomac River basin. Obtained currently available information on projected land use.

2007: Reviewed a draft presentation on roadway de-icers designed to initiate dialogue with state and local transportation agency staff on best practices for minimizing the impact of snow and ice operations.

Met with Maryland Department of Transportation (MDOT) and Virginia Department of Transportation (VDOT) to discuss snow and ice management operations.

2008: Prepared a list of resources on roadway and airport deicing activities for the Partnership's website. This includes information on practical measures to reduce winter weather-related deicing salt usage.

Obtained information on the use of deicing chemicals, including chemicals used, alternatives, best management practices, and issues associated with the use of various chemicals

2009: Reviewed major NPDES permits in the basin for issues of interest to water supply. Assessed the usefulness and feasibility of developing a position statement and common language that can be incorporated into NPDES permits in the basin. This is in progress. Draft language developed and an information session on NPDES permitting was held in 2009.

Prepare an opinion article on deicers that was published in the *Washington Post*.

Participated in the MWCOG-sponsored workshop on Green Highways.

2010: Drafted comments on proposed legislation requiring the Maryland State Highway Administration and each local jurisdiction that is responsible for highway maintenance in the state to establish and implement a best practices road salt management program.

Held a workshop on Clean Water Act water quality standards and Safe Drinking Water Act/source water issues.

Drafted comments on proposed EPA Airport Deicing Effluent Guidelines regulation.

In Progress: Continue dialogue with communities identified as possible locations for urban stormwater projects and other priority communities. Priority communities are identified based on proximity, density, potential for protection, or other parameters.

Pursue opportunities for education & training on snow- and ice-removal practices which improve protection of drinking water sources.

Invite states to present case studies of MS4 permits as potential "model permit".

Develop a working group in the Partnership to review major NPDES permits in the basin to determine if any water supply related issues are justified and develop comments.

Develop a small ad-hoc working group to meet with state NPDES representatives to discuss source water protection priorities. Meet with state agencies in the basin to discuss common issues and conditions that can be integrated into permits to benefit source water protection.

Look into the possibility of using secondary water quality standards that could lead to a reduction in road salt use, like a total dissolved solids limit.

Track regional programs and initiatives that may impact urban source water protection efforts in the Potomac basin.

Ag Issues

2008: Coordinated with Pathogens Workgroup to hold Ag 101 workshop.

Coordinated with Pathogens Workgroup to tour dairy and beef cattle farms.

2009: Continued development of agricultural best management practice (BMP) implementation strategy.

Conducted literature search and contacted researchers to determine how much is known about effectiveness of farm BMPs and operational solutions for reducing Crypto, pharmaceuticals, other emerging contaminants.

Identified potential partners and scoped out potential pilot projects.

Reviewed 319 watershed plans to determine where best to start an educational outreach program to address *Cryptosporidium*.

Established alliance with Maryland Department of Agriculture Resource Conservation Operations.

Developed Ag Issues webpage.

Developed a *Cryptosporidium* message that targets the ag community.

Established alliance with NYC Watershed Agricultural Council

2010: Engaged Maryland State Technical Committee (STC) to solicit feedback on the *Cryptosporidium* message developed by the group in 2009.

Held a *Cryptosporidium* education session with Penn State's webinar program "Manure du Jour."

Engaged local and national *Cryptosporidium* experts and created an advisory committee.

Reaching Out

2008: Participated in the development of informational material concerning EDCs, and road salts, among other things.

Worked with the Early Warning/Emergency Response workgroup in developing a strategy to meet with Colonial Pipeline Company to begin discussions of possible joint exercises on spill response.

2009: Construct DWSPP informational web pages on EDCs (with EC workgroup).

Worked with the Urban Issues workgroup to prepare an opinion article on the use of deicing chemicals for publication in the *Washington Post*.

Assisted in developing informational material concerning early warning and spill response, agricultural initiatives, EDCs, and road salts, among other topics for the Partnership's workgroups.

2010: Assisted the Ag Issues workgroup with finding appropriate photos for the "Manure du Jour" webinar session.

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.

Monitored MWCOG water quality blogging initiative.

Provided feedback to EPA Region 3 on blog posts for their blog "Healthy Waters for EPA's Mid-Atlantic Region."

On-going: Develop annual report.

Organize annual meeting.

Present to and meet with outside groups interested in learning about the Partnership.

Maintain website.