

# Environmental Performance Partnership Agreement

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Minnesota Pollution Control Agency  
U.S. Environmental Protection Agency Region 5

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October 1, 2008 – September 30, 2012  
FFY 2009 – 2012

## SELF – ASSESSMENT FFY2010

October 1, 2008 – September 30, 2009 (1<sup>st</sup> year report)  
October 1, 2009 – September 30, 2010 (2<sup>nd</sup> year report – in blue)



Minnesota Pollution  
Control Agency

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## Authorizing Signatures

This PPA is approved on the date of the last signature received.

For the State of Minnesota:

\_\_\_\_\_  
Paul Assen, Commissioner  
Minnesota Pollution Control Agency

\_\_\_\_\_  
Date

For the U.S. Environmental Protection Agency, Region 5:

\_\_\_\_\_  
Susan Hedman, Regional Administrator  
U.S. Environmental Protection Agency, Region 5

\_\_\_\_\_  
Date

## Purpose and scope of the PPA

The Minnesota Pollution Control Agency (MPCA) and the United States Environmental Protection Agency (EPA) Region 5 are entering their eighth Environmental Performance Partnership Agreement (PPA) with the approval of this document. This agreement describes the environmental outcomes that both Agencies are striving to achieve and joint program priorities that the State and EPA think need additional management attention. Roles and responsibilities for carrying out the priorities and key strategies are described in detailed supporting information that can be found on MPCA's website <http://www.pca.state.mn.us>, or by contacting the persons listed at the end of each priority write-up. The agreement runs from October 1, 2008, to September 30, 2012.

This agreement is a product of the National Environmental Performance Partnership System (NEPPS), a joint initiative of the EPA and Environmental Council of States (ECOS). The objective of the NEPPS initiative is to strengthen protection of public health and the environment by directing limited resources toward a state's most pressing environmental issues. Performance Partnership Agreements (PPAs) formed under NEPPS is designed to provide states and EPA with flexibility in how they achieve environmental results and enhance accountability in achieving environmental progress. The Performance Partnership Grant (PPG) is the federal grant used to fund many of the PPA activities.

This agreement does not replace or supersede statutes, regulations, delegation agreements, or other agreements entered into previously between MPCA and EPA.

## PPA / PPG changes with this grant cycle

The PPA is an extension of MPCA's Strategic Plan and EPA's Regional Plan. For this grant cycle, the MPCA joined efforts with EPA's Maximizing Performance Partnership Initiative. As a result, MPCA is separating out its Performance Partnership Agreement (PPA) from the Performance Partnership Grant (PPG) to allow focus on shared priorities and other high level regional discussion items separate from the detailed workplan measures and activities under the PPG.

## Elements of the PPA

The PPA is a concise, strategic document focused on common goals, well-defined outcomes, and strategies with program tools and resources targeted at the most important environmental problems. It includes both MPCA and EPA work. In addition to Shared Priorities, the PPA includes a limited set of critical performance measures and commitments for the base environmental programs.

- .. The PPA is a summary of the work done under EPA grants as well as some work done under non EPA grants. Supporting documentation is available in separate documents and references. Much of this information can be found on the MPCA web site referenced in the opening paragraph.
- .. The PPA provides strategic direction to the workforce and influences program work plans by promoting environmental innovations that result in more efficient approaches.
- .. The PPA is viewed as a "living document" that is flexible and can be changed to reflect MPCA and EPA needs.
- .. The PPA directs planning at the MPCA and EPA Division and Program levels, by establishing shared priorities, desired outcomes, and a holistic approach to environmental protection. It will also promote environmental innovations that result in more efficient approaches. To the extent applicable, base programs will use the shared priorities as they develop program work plans to influence the targeting of work.

- “ If a program has been performing in a successful manner, and is expected to continue performing in that manner. *Program performance will be identified as either “adequate” or “needs improvement.” “Adequate” program areas are meeting their stated commitments and performing to the mutual satisfaction of both agencies. “Needs improvement” means a program area is, or is at risk of, inadequately functioning, and the deficiency represents a significant vulnerability to the integrity of the environmental protection program in the State. Adequate programs would receive significantly less review and oversight than programs needing improvement.* The level of detail will need to meet the minimum reporting requirements for EPA Headquarters and Congress. It will be Region 5’s responsibility to identify and inform the MPCA of the minimum level of detail needed. The evaluation to determine “adequate” and “needs improvement” programs will occur during the joint assessment process held at the end of each year.
- “ The PPA and supporting documentation establishes a framework for mutual accountability by clearly defining shared priorities, desired outcomes, and clear roles for EPA and the MPCA.
- “ The PPA includes a summary of the environmental conditions in Minnesota to be used as a baseline for measuring future success.
- “ The PPA establishes joint assessment for the priority work. By “joint assessment” we mean the following:
  - An annual discussion between the EPA and the MPCA leadership, including program Division Directors, to highlight and celebrate successful program achievements; to identify areas that need improvement and/or additional resources; to make adjustments in program direction or approaches; and to reflect on lessons learned for the coming year.*

## Mutual Accountability

The approach to mutual accountability affects the way that EPA and MPCA interact and is a change from EPA’s traditional approach to oversight. EPA and MPCA will agree on the appropriate level of EPA oversight of State program implementation. One primary consideration will be those program areas that are deemed to “need improvement.” However, EPA will continue to review and act on new regulations in program areas that impact State authorization or where federal statute or regulation requires EPA review and approval of State actions (e.g., water quality standards).

## Enforcement and Compliance Assurance

Compliance and enforcement activities to be accomplished during the term of this PPA are included in the detailed State program plans; however, a summary of the federal and MPCA roles in compliance and enforcement is helpful.

The following tenets serve as the foundation for the EPA-MPCA relationship with respect to Enforcement and Compliance Assistance activities:

- Explore the most effective application of the full spectrum of compliance tools - from compliance assistance through compliance assurance, administrative/civil enforcement to criminal prosecution - to encourage/maintain the compliance of sources of all sizes.
- Use joint up-front planning to coordinate priorities, maximize agency resources, avoid duplication of efforts, eliminate surprises and institutionalize communication.
- Manage for environmental results which support the respective agencies’ environmental goals and objectives.
- MPCA will ensure that compliance and enforcement information is complete, accurate and timely, consistent with EPA policies and the Information Collection Request (ICR).

There is a continuing role for EPA in environmental protection in the State of Minnesota. EPA carries out its responsibilities in the enforcement arena in a variety of ways. The Agency acts as an environmental steward, ensuring that national standards for the protection of human health and environment are implemented, monitored and enforced consistently in all States. EPA can assist MPCA in conducting inspections and conduct joint enforcement actions with the State and its local government partners. EPA can also conduct enforcement actions as discussed below and provide compliance and technical assistance to the State and its regulated entities. Under this PPA, EPA and MPCA retain their authorities and responsibilities to conduct enforcement and compliance assistance, and such enforcement will be accomplished in the spirit of cooperation and trust. Specific compliance and enforcement data needs will be discussed and shared per each agency's applicable policies and regulations. Specific federal enforcement and compliance assistance responsibilities include but are not limited to the following:

- Work on National Priorities (e.g. multi-media inspections, companies with significant company-wide non-compliance in several states, and OECA (Office of Enforcement and Compliance Assistance) Priorities and Regional Priorities).
- Ensuring a level playing field and National consistency across State boundaries.
- Addressing interstate and international pollution (watersheds, air sheds, or other geographic units).
- Addressing criminal violations
- Conducting enforcement to assure compliance with federal consent decrees, consent agreements, federal interagency agreements, judgments and orders.
- Conducting State Reviews in accordance with the OECA's National State Review Framework.

EPA performed a review of the MPCA's RCRA (Resource Conservation and Recovery Act), NPDES (National Pollutant Discharge Elimination System) and CAA (Clean Air Act) compliance and enforcement programs in 2007 under the State Review Framework, and it will do this again in 2010. EPA also performed an on-site file review of MPCA's RCRA enforcement files in 2008 and it will do so again in 2009, 2011 and 2012. All file reviews, as well as the review under the State Review Framework; will include a subset of files from any metro county which has entered into a Joint Powers Agreement (JPA) with MPCA.

MPCA has been successful in its requests for inspection flexibility from the RCRA program. MPCA has executed a JPA with Hennepin County in 2008, and both parties intend to maintain this agreement through the PPA time frame. MPCA intends to conclude JPAs with additional metro counties during the PPA time frame. MPCA has executed its Hospital Initiative flexibility plan in 2008, and will continue this initiative to its conclusion in 2009. EPA and MPCA will continue efforts to be flexible when coordinating priorities and maximizing individual agency resources.

EPA will take enforcement actions in Minnesota as necessary and appropriate to ensure implementation of federal programs and as a deterrent to non-compliance, in accordance with the communication and coordination activities outlined above. There may be emergency situations or criminal matters that require EPA to take immediate action (e.g., seeking a temporary restraining order). In those circumstances, EPA will consult with the State as quickly as possible following initiation of the action.

## **Unexpected Requests**

When EPA forwards requests from headquarters, it will be accompanied by a short explanation of what is expected from the states, and the deadline for response. MPCA will respond to requests in a timely manner. Both agencies will provide ample lead time for review, collection and feedback on data and information. In some cases, this may require the two agencies to determine if there are PPG/PPA activities that need to be altered to provide available funding and staff for the new request.



## Quality Assurance and Quality Management Plans

The MPCA has a quality system in place as described in the Quality Management Plan (QMP) found on the web at <http://www.pca.state.mn.us/index.php/view-document.html?gid=5479>

The system consists of various levels of management oversight on projects and programs, staff training on quality assurance principles, and the use of the quality assurance coordinators at the agency for document review and technical assistance. Additional parts of the program policies can be found on the QA website noted above. The policies direct staff and individuals working with the MPCA on minimal requirements for field and laboratory quality assurance, documents required on sites, and links to other agencies and federal programs where additional information may be found. The MPCA quality system was audited (July 2004) by EPA Region 5 verifying that the system is in place, is functioning properly, and is documented in the Quality Management Plan. A revised MPCA QMP was submitted in March 2007 for review and comments by EPA Region 5. Any additional revisions based on EPA's comments will be completed prior to approval of the QMP.

## Reporting

The MPCA will continue to report to EPA the necessary information required by Congress and EPA Headquarters to continue state delegated programs. The MPCA will reference its web site and other existing reports as supporting documentation of the PPA and PPG. Both EPA and MPCA will report through the Joint Assessment process.

## Public involvement

In addition to the public participation opportunities required by regulation, the MPCA will continue to use citizen and stakeholder surveys and other methods of gathering input to influence environmental decision and direction. The MPCA has a long history of public involvement in decision making and developing environmental programs. In past years, the MPCA has considered input from the public through the use of statewide surveys and focus groups, listening sessions and citizen juries. All of these methods give us information on the public's environmental priorities so that they may be incorporated into the selection of our environmental goals. Citizen input is used to draft guiding documents such as basin plans and TMDL (Total Maximum Daily Loads) studies.

The MPCA will continue to work closely with EPA Region 5 to identify stakeholders for Minnesota's environment, develop general public support for state and federal environmental programs, raise awareness about important environmental issues, and share information about these issues.

### On-going public involvement projects:

The 2008 strategic plan for the agency includes the following goal:

*Goal R.3 Minnesotans act on their environmental knowledge to support healthy ecosystems.*

To that end, the following objective was adopted as part of the strategic plan:

*Objective R3a) Minnesotans maintain or increase their general environmental knowledge and environmental behavior scores from the baseline data presented in the 2002 Minnesota Report Card on Environmental Literacy.*

The Report Card is based on a random telephone survey of over 1000 adults throughout the state of Minnesota who were surveyed for their knowledge about, attitudes toward, and behaviors related to the environment in Minnesota. The first survey was done in 2001 and reported in 2002. The second

survey was done in 2003 and the results released in 2004. Among the findings of the second Report Card:

- An overwhelming majority (80 percent) of Minnesotans view a candidate's record on the environment as important when voting.
- 82 percent view loss of wetlands and residential runoff from yards as serious.
- 90 percent of Minnesotans want schools to provide environmental education. This is not surprising given the interest of residents in providing quality education to the state's children.
- Minnesotans are acting to protect the environment. Most Minnesotans frequently conserve energy (87 percent); do not use fertilizer on their lawns or use a phosphorus-free fertilizer (62 percent); and conserve water (51 percent).
- There is a connection between increased environmental knowledge, a more positive environmental attitude, and behavior changes to protect the environment. Respondents who received a higher grade in general environmental knowledge were significantly more likely to have a positive attitude toward the environment and to engage in more positive environmental behaviors.

The last finding has the most significant implications for the MPCA and the environmental education specialists within the MPCA and around the state. The Literacy survey was conducted again this past summer and the results of the 2008 Minnesota Report Card on Environmental Literacy will be released in late fall, 2008.

Public participation is seen as an integral part of the Total Maximum Daily Load (TMDL) study and implementation process.

The goal of the Impaired Waters or TMDL Program is to ensure that all Minnesota waters meet water quality standards. For each water body not meeting standards, a TMDL study must be developed. A TMDL study examines all sources of pollution causing a water body to be impaired and suggests specific ways to reduce both point and nonpoint sources of pollution. While point source reductions can typically be accomplished using regulatory mechanisms (permit requirements, etc.), nonpoint sources must still be addressed through voluntary actions by individual citizens and stakeholders.

In many cases, nonpoint sources are causing the impairments in a water body. In these cases, we will have to rely upon average citizens to implement the best management practices deemed most likely to improve water quality. This will require a citizenry that is aware, open and amenable to changing behaviors. The most successful projects are those where citizens have had direct involvement in studying the problem and in creating an implementation plan to improve water quality.

The MPCA has had some success involving stakeholders in various TMDL studies. However, we have less experience engaging average citizens in the implementation phase of projects. Both can be very time-consuming tasks and difficult to plan and conduct. Staff knowledge and experience in engaging the public is variable. Consequently, Agency staffs are working toward the development of "best practices" for civic engagement in TMDL projects. We recognize the need for more rigor and consistency when planning for public involvement, especially in the implementation phase of the projects. It is likely to take several more years before MPCA has developed a comprehensive approach to civic engagement in TMDL projects. In the meantime, MPCA staff will continue to engage stakeholders and citizens using the best available tools and techniques currently available.

In addition, the MPCA is interested in public perception about the agency and the work we do. Most years the MPCA includes several questions on the statewide Omnibus Survey conducted by the University of Minnesota Center for Survey Research in the late fall. The following questions are asked on a regular basis for the purpose of determining awareness and trends over time:

- Do you have an idea what the Minnesota Pollution Control Agency does? (Yes, No, Maybe)
- (If yes or maybe) How did you find out what they do?
- Overall, how do you think the Minnesota Pollution Control Agency does at protecting the environment? (Excellent, Good, Fair, Poor)
- How do you have this impression of the Minnesota Pollution Control Agency?

The information is used by the MPCA management and communication team to better tailor our messages to more effectively reach our intended audiences.

For more information about MPCA's Public involvement efforts, go to: <http://www.pca.state.mn.us> Search under public participation.

<http://www.seek.state.mn.us/publications/reportcard2002.pdf>

[http://www.seek.state.mn.us/eemn\\_b.cfm](http://www.seek.state.mn.us/eemn_b.cfm)

## Environmental Conditions in Minnesota

To put the elements of the 2009 – 2012 PPA in context, it is useful to take a brief look at the past four decades of progress and the current state of our waters, our air and our land. A summary of Minnesota's current environmental conditions follows:

### Water

Minnesota waters today are decidedly cleaner than they were in the 1960s and 1970s. Industrial and municipal discharges have been addressed. Most combined storm and sanitary sewers have been separated, significantly reducing overflows into the Mississippi. Fish, wildlife and boaters have returned to waters once heavily polluted by human and industrial waste.

Despite decades of progress in cleaning up water pollution, hundreds of Minnesota's lakes, rivers and streams are still not healthy enough for people to safely use and enjoy. These impaired waters do not meet water quality standards and pose risks to people and aquatic life. They contain too much sediment, bacteria, mercury, phosphorus and/or other contaminants. Biotic integrity also is impaired by physical alterations and invasive species.

MPCA staff identified 297 additional impairments in the 2008 assessment process for sections 303d and 305b of the Clean Water Act. There are now 349 rivers and streams impaired for one or more pollutants, and 1,028 lakes and wetlands impaired for one or more pollutants, resulting in a total of 2,575 individual impairments in Minnesota waters to date. Due to the vast abundance of waters in the state and limited staff and funding to assess them, only a small portion, approximately 14 percent of the state's river miles and 18 percent of its lakes, has been formally assessed for impairments.

Once all Minnesota waters have been assessed, more than 10,000 impairments will likely have been found, located in every watershed in the state, given the 40 percent impairment rate noted so far for waters assessed here and nationally. The MPCA is on track to intensively monitor all of the state's major watersheds in the next ten years and through the 2008 sampling season 11 percent of Minnesota watersheds either have been sampled or sampling is underway. Correcting the water quality problems is

made more challenging by the diffuse nature of the impairment sources, such as polluted stormwater, agricultural runoff, and atmospheric deposition of contaminants. Furthermore, distant water quality problems, such as hypoxia in the Gulf of Mexico, may be caused in part by nonpoint source pollutants coming from Minnesota and other Midwestern states. These numbers represent huge environmental, economic and quality of life concerns, and underscore the need for stable, effective funding of impaired waters assessment and cleanup by state, local and private partners.

## **Land**

During the 1980s and 90s, Minnesota took decisive and effective steps to clean up industrial and municipal waste dumps and leak sites that contaminated land and ground water. A series of laws and programs were enacted in Minnesota and nationally to appropriate funds, compel cleanup of the most serious sites, and to create incentives and funding sources to encourage voluntary cleanups.

The state Superfund, enacted in 1983, handles contaminated sites that are large and complicated and that may take several years to fully address. Remediation Division has done or overseen full investigation and final cleanup or control of 160 out of 237 listed industrial waste sites, and 21 of 46 Minnesota sites on the federal Superfund list. The remainder of the listed sites is in the cleanup process. Most sites need ongoing monitoring and maintenance for many years or decades.

The MPCA's award-winning Voluntary Investigation and Cleanup (VIC) program has overseen over 3,000 contaminated projects since its inception in 1988. A total of 3,841 liability assurances or other determination through the VIC program have been issued upon completion of investigation and, if necessary, remedial activities. This has contributed to those properties becoming candidates for sale, refinancing, or redevelopment. More than 566,000 acres of land have been returned to productive use. About 200 new projects are screened and processed each year in this program, which streamlines the investigation and encourages responsible parties to quickly address problem sites without the fear of protracted litigation that slowed earlier cleanup efforts.

Since 1990, the Resource Conservation and Recovery Act (RCRA) remediation program has completed the investigation and remediation of 262 hazardous waste release sites. The sites consist of hazardous waste generators, permitted RCRA facilities, and former facilities that operated under interim status.

For petroleum leaks, the story is similar. The Petrofund and Petroleum Remediation Program, created in 1987, has investigated and closed more than 15,000 of the 16,700 petroleum leak sites on its roster. About 350 new sites are expected to enter this program each year for the foreseeable future. The Petroleum Brownfield Program, a voluntary program similar to VIC, has helped streamline assessment and cleanup actions at more than 2,500 sites, leading to the restoration of more than 1,500 acres in each of the past five years. The voluntary approaches result in liability assurance letters from the MPCA, as well as development plan approvals aiding redevelopment.

The Closed Landfill Program (CLP) was created by the legislature in 1994 as an alternative to Superfund. The CLP is responsible for cleanup and long-term care at up to 112 qualified closed state-permitted municipal waste landfills. Cleanup actions have included relocation of wastes, enhancement of site covers to current standards and installation of ground water pump/treat and active gas collection systems. Other response actions have included sampling and monitoring, operation of active remediation systems, general site care, reimbursement of certain past costs and land and property management. The CLP now operates 20 active gas collection systems which have destroyed more than 100 million pounds of methane in the past 4 years alone. A pilot Landfill Gas to Energy project was initiated using Stirling engines in 2007 at the WDE Landfill, a former NPL (National Priorities List)

Superfund site. The CLP is currently undergoing a redesign effort to better address implementation of program requirements including development of Land Use Plans (LUPs) for landfills. LUPs are recognized as institutional controls to help the CLP, land owners and local governmental units responsibly manage qualified [landfill] facilities.

## **Ground Water**

Ground water is the source of drinking water for more than 70 percent of Minnesotans and is a major asset to agriculture and industry. Many threats to Minnesota's abundant ground water have been reduced in recent years by strong cleanup programs and preventive waste management practices, including waste reduction and recycling. However, continued residential and commercial growth along the St. Cloud-Twin Cities-Rochester corridor have begun to strain supplies of clean, available ground water in some areas. In addition, increasing withdrawals for irrigation and biofuels production have caused localized ground water shortages and will require careful monitoring in the future.

In recent years, the MPCA has re-established its ambient well monitoring network and is currently seeking additional funding to allow for construction of new wells in vulnerable aquifers to add to the network. The MPCA coordinates water monitoring and data sharing through an interagency agreement with the Minnesota Departments of Agriculture and Health. The three agencies track trends in ambient ground water quality for nitrates, volatile organic compounds (VOCs) chlorides, pesticides and other parameters, focusing on vulnerable aquifers, recharge zones and areas where land use is changing.

A 2007 MPCA report describing the statewide condition of Minnesota's ground water made the following conclusions:

- Ground water quality is generally good and complies with drinking water standards; however, human-caused impacts to ground water quality are apparent in many areas of the state.
- In urban areas, especially in the Twin Cities metropolitan area, Rochester and St. Cloud, elevated concentrations of chloride and nitrate and detectable concentrations of VOCs are common.
- In rural and agricultural areas, nitrate concentrations are frequently elevated or exceed standards; and pesticides and pesticide degradates are commonly detected, though at concentrations that are nearly always less than applicable drinking water standards.
- Areas of impacted ground water correlate well with land uses that are known to cause the observed quality impacts. The prevalence of elevated nitrate concentrations in ground water in regions dominated by agricultural land uses and in unsewered residential areas is particularly noteworthy.

A major challenge now facing ground water managers is the large number of newly recognized environmental contaminants from consumer products, waste disposal, agricultural and urban runoff, residential and industrial wastewater, and long-range atmospheric transport. These "emerging contaminants" are not currently incorporated into routine monitoring programs. Special studies are underway in Minnesota to determine the magnitude and extent of a number of these compounds in the environment, with particular focus on perfluorinated chemicals (PFCs) and endocrine-disrupting compounds (EDCs).

## **Air**

By many measures, Minnesota has good air quality. Even in the Twin Cities Metropolitan area which includes over three million people, the state has historically fully attained all national ambient air quality standards. This is due in part to favorable geography and weather patterns, but credit must also be given to pollution control efforts by government and industry.

However, significant challenges loom. Since 2007, both the ozone and fine particle (PM<sub>2.5</sub>) standards were lowered. Currently, ozone is at 95 percent of the standard and PM<sub>2.5</sub> is at 85 percent of the standard. Fine particles from mobile and combustion sources add to regional haze and are of concern as research shows serious heart and lung effects on poor air quality days. In addition, the lead standard has been lowered in 2008, and as a result, there is one new non-attainment area in the Twin Cities.

While most air toxics have been decreasing in concentration, a few such as formaldehyde are near or above health benchmarks. In 2007, daily concentrations of ozone or fine particles were high enough to result in air quality alerts for sensitive groups on nine days in the Twin Cities area. Moderate air quality days (178) were equivalent to good air quality days (178) in 2007.

Attainment of national standards is important for both human health and economic health, as non-attainment designation means development restrictions. The combined effect of lower standards, regional air masses drifting into Minnesota from other states and increasing temperatures may trigger future air quality violations of the standards, and compel more air quality alerts. A broad-based coalition of stakeholders from government, environmental groups and industry--Clean Air Minnesota--is working on voluntary measures to reduce pollutants and prevent non-attainment. Federal clean fuel requirements and other government and industry measures will help, but the outcome is uncertain.

In addition, emissions of carbon dioxide continue to increase in Minnesota, primarily from the burning of fossil fuels. The increased levels of carbon dioxide and other global warming gases are linked to climate change. In Minnesota, observed changes include higher temperatures, shorter winter lake ice cover, higher summer dew points, northward species migration, and more frequent heavy rain falls and floods.

## Outlook

Minnesota, in partnership with EPA and other stakeholders, can be proud of its environmental record, but must be ready for continuing challenges, as noted above. Cross-boundary problems such as persistent toxins, climate change, and hypoxia in the Gulf of Mexico as well as multi-media issues like mercury, will require good science, increased partnerships, and innovation to assure a healthy environment for current and future generations.

## NPDES Permitting

Accurate and enforceable NPDES permits are an essential part of our environmental protection efforts. Both agencies recognize that there are general areas within the NPDES program that will receive our attention within the course of this PPA. These include the issuance of priority permits, maintenance of permit backlog goals, and accomplishments identified in the Performance for Environmental Results action items.

EPA Region 5 and Minnesota Pollution Control Agency will explore opportunities to continue to expand the use of water quality trading, watershed permitting, and implementation of nutrient controls in NPDES permits. In the next four years we will focus on these as well as other items outlined or included in more detail in the MPCA FFY2009 - 2012 Performance Partnership Grant Work Plan, and the MPCA Water Quality Point Source Management Plans, for the next four years including commitments and measurable outcomes.

### EPA comments:

MPCA is attempting to ensure that NPDES permits will continue to be issued, despite staff vacancies, in order to meet goals for priority permits, stormwater permits, CAFO permits, maintenance of permit backlogs, and the accomplishments identified in the Performance for Environment Results action items.

EPA Region 5 and the MPCA have worked together to draft rules for water quality trade programs; explore how watershed-based NPDES permitting will be used to issue permits before TMDLs are completed, and; draft technical procedures to implement nutrient criteria in permits.

## **Perfluorochemicals - EPA Acknowledgement**

The MPCA proposes to collaborate with EPA on the investigation, prevention, control, and mitigation of emerging contaminants of concern, focusing on perfluorochemicals (PFCs). The MPCA hopes to improve EPA and MPCA's ability to appropriately respond and take action to reduce human and environmental health risks from PFCs. The MPCA proposed this as a joint priority for FFY2009 at our joint priority meeting on October 14, 2008, but the EPA thought that perhaps it was premature. However, the EPA acknowledges that this is an important area and that EPA will assist the MPCA in whatever way it can to facilitate or be a conduit for the MPCA's success in dealing with PFC issues. Emerging contaminants with focus on PFCs will remain a likely joint priority candidate in future years under the PPA.

## **Joint Priorities for FFY2009 – 2012**

Joint priorities represent a subset of environmental program responsibilities that MPCA and EPA jointly agree to carry out. They represent investment priorities for the PPA period for one or more reasons below:

- The program is an important, newly developing program that requires the attention of the Commissioner and Regional Administrator and senior managers to adequately grow;
- The program area is, or is at risk of, inadequately functioning, and the deficiency represents a significant vulnerability to the integrity of the environmental protection program in the State;
- The program represents a long-term strategic investment opportunity in the State; and
- The program offers the opportunity to demonstrate innovations to promote environmental improvement or enable efficiency enhancements.

In the PPA, and supporting documentation, the agencies will describe the basis for the priority and the expected outcome of the effort; the roles each agency will undertake and level of effort; and significant milestones. The results of our work on each joint priority will be reported during the joint assessment, including, to the extent applicable the impact of any disinvestments made to support the joint priority work.

*The priority write-ups in the PPA are only of summary of the actual priorities. Complete write-ups and detailed information about the priorities is available by contacting the staff persons listed at the end of each priority summary.*

MPCA and EPA have agreed to the following five priority areas:

1. Air Toxics Program Development
2. Impaired Waters – with added element: Major watershed framework for completing multi-parameter/multi-segment TMDLs
3. Water Quality Monitoring
4. Midwest Clean Diesel Initiative
5. Home Land Security

# *Air Toxics Program Development*

October 1, 2008 – September 30, 2012

## **Objective:**

MPCA and EPA Region 5 staffs propose to collaborate, develop and implement a program to address sources of air pollutant emissions. This joint priority proposal is directed at improving EPA and MPCA's ability to identify potential areas of concern with respect to air toxic pollutants and seek mitigation as necessary and appropriate to protect the state environment.

EPA Region 5 and MPCA staff will continue to collaborate on the statewide cumulative risk assessment screening tool and in developing a systematic statewide air toxics program.

MPCA Contact: Frank Kohlasch

EPA Region 5 Contact: Jacqueline Nwia

In the upcoming years (2009-2012), we propose to initiate the next phase of this effort and continue the joint priority of previous PPAs in developing a systematic statewide air toxics program. Previous phases focused on the initial development of Minnesota Risk Screening (MnRiskS) tool and EPA staff peer review of the tool. This software tool estimates combined health risks from air emissions of multiple contaminants from multiple sources and through multiple exposure pathways.

MPCA staff has recently updated the strategic plan for the agency. One of the goals is that outdoor air quality will meet environmental and human health benchmarks for toxic and other air pollutants. The updated objective for this goal is:

The MPCA will target reductions in statewide risk from air toxics by:

- Calculating cancer and non-cancer risks in statewide ambient air using modeling and ambient monitoring by July 1, 2009.
- Identifying the pollutants that largely contribute to cancer and non-cancer risk by July 1, 2009.
- Developing strategies to reduce emissions and concentrations of these risk drivers by July 1, 2010.

MnRiskS will be used to develop our statewide air toxic program and meet these objectives.

We have recently (Summer 2008) accepted the production version of the software after updating and validating the input data (e.g., emissions, toxicity values, chemical and physical parameters important for fate and transport) and completing a series of acceptance tests. MPCA staff currently are familiarizing themselves with all aspects of MnRiskS and completing a series of validation and comparison tests of the results. We anticipate that a more comprehensive discussion of respective responsibilities for MPCA and EPA Region 5 staff will be constructive in the 2<sup>nd</sup> quarter of 2009.

## **FFY2009 Report:**

Updates for future years' actions were agreed to at the July 2009 meeting with EPA Region 5 Air Program. These are:

MPCA actions:

1. Complete first phase of validation and comparison tests and initial results (2002 emissions and ISC):
  - Compare monitoring and modeled values (air concentrations, available fish tissue data).
  - Compare calculated results of past studies with calculated results from MnRiskS.
  - Document findings, strengths and weaknesses.



2. Develop and implement a communication plan.
3. Update MnRiskS with processed 2005 emissions and AERMOD.
4. Continue extraction, evaluation and validation of database.
5. Apply MnRiskS to issue specific questions.
6. Develop framework to develop and implement strategies to reduce impact of Pollutants.
  - How and when to engage stakeholders.
  - How to better communicate risk issues.
  - Options for permitting facilities in areas with high background risks.

EPA Region 5 actions (from the previous PPA & from July conversation):

1. Provide accreditation and concurrence regarding validity on the use of MnRiskS.
2. Provide information about Community Action for a Renewed Environment (CARE) program and experiences working with groups in other states, i.e., the Detroit program.
3. Provide information on how other states in the nation address air toxics from all types of sources.
4. Provide assistance as needed.
5. Facilitate discussions with EPA Headquarters, other offices and regions on identified issues.
6. Provide assistance in interpreting MnRiskS results and in scoping statewide air toxics program options.

#### Results:

MPCA staff has completed the first phase of validation and comparison tests of the initial MnRiskS tool - this version used 2002 emissions and the ISC model to disperse pollutants. The results have been summarized in a report that has been accepted for presentation at annual conference of the International Society of Exposure Science. The results of this version have been shared internally and with EPA Region 5. The results from MnRiskS are also used (in concert with our monitoring results) to inform our strategic objectives - calculation of cancer and non-cancer risks and identification of pollutants that largely contribute to these risks. Pollutants identified in August 2009 are acrolein, diesel PM, dioxins/furans, PAHs, formaldehyde and PM<sub>2.5</sub>.

We have also initiated processing of 2005 emissions for the next version of MnRiskS that will use AERMOD to disperse pollutants.

#### FFY2010 Report:

##### Improvements and Maintenance of MNRiskS (Actions 3 and 4)

MPCA has contracted with Lakes Environmental to assist in a new version of MNRiskS that will incorporate improvements and enhancements:

- 2005 emissions using AERMOD to disperse emissions.
- Improved spatial resolution of emissions from on road sources.
- Improved risk receptor coverage in areas with few point sources.
- Ability to group subcategory information and results from area and mobile sources.
- User enhancements in querying.

Status: in progress. MPCA anticipates receipt of next version in winter 2011 and will evaluate and validate this version. Lessons learned from this update will be used to prepare for updating with 2008 emissions.

### Communication (Action 2)

MPCA staff has provided overviews and electronic tours of MNRiskS to parties to internal and external interested parties. External include:

- Minnesota Environmental Initiative representative,
- Minnesota Center for Environmental Advocacy representatives,
- EPA Region 5 staff, and
- Clean Air Minnesota members.

### Using data from MNRiskS (Actions 5 and 6)

Recent uses of MNRiskS:

- MNRiskS is part of dataset to inform cumulative levels and effects in permitting arena. This aids in implementing a statutory change in MPCA authority on considerations for air permitting in a region of Hennepin County.
- Providing context for environmental review of specific projects.
- Data from MNRiskS was used to inform the Air Pollution Reduction Strategy – Phase 1 Technical Team.

### Continuing actions:

MPCA staff will continue actions 2-6 listed above under FFY2009 Report.

### EPA comments:

The grantee reports that they have met or are meeting the commitments (including environmental results and programmatic commitments) in area outlined in the work plan/EnPPA to date.

### Additional information:

For more information on the Air Toxic Joint Priority, contact:

At MPCA: Frank Kohlasch at 651-757-2500 or [frank.kohlasch@state.mn.us](mailto:frank.kohlasch@state.mn.us); or  
Shelley Burman at 651-757-2255 or [shelley.burman@state.mn.us](mailto:shelley.burman@state.mn.us).

At EPA Region 5: Jacqueline Nwia at 312-886-6081 or [nwia.jacqueline@epa.gov](mailto:nwia.jacqueline@epa.gov).

## *Impaired Waters*

October 1, 2008 – September 30, 2012

### **Statement of Environmental Problem/Issue:**

Based on the Minnesota's 2008 303(d) impaired waters list, there are 2,575 impairments on 1028 lakes and 349 rivers. [The draft 2010 list contains 3,049 impairments.](#) Minnesota is committed to using the impaired waters approach to restore waterbodies to meeting their designated uses, while at the same time maintaining those waters that are meeting designated uses.

The MPCA will continue to work on its impaired waters approach with stakeholders through the Clean Water Council (see program development section below), [with other state agencies through the Clean Water Fund Interagency Coordination Team and its subteams,](#) and while working with Region 5 to meet the commitments set out in 303(d) of the Clean Water Act. This revision of the joint priority addresses these mutual efforts over the next four years.

This joint priority is broken into three components: **Program Development, Total Maximum Daily Load Studies (TMDLs), and Implementation.** Assessment and impaired waters listing activities are addressed in the Monitoring and Assessment shared priority section of this report.

**MPCA Strategy:** Restore the chemical, physical and biological integrity of Minnesota lakes, streams, and wetlands that do not support designated uses.

**EPA Strategy:** Improve water quality conditions in impaired watersheds and restore impaired waterbodies to achieve designated uses.

### **Program Development Priorities:**

The MPCA's program development activities are driven in large part by Minnesota's Clean Water Legacy Act (CWLA). Signed into law on June 2, 2006, the purpose of the law is "to provide authority, direction and resources to protect and restore the state's surface waters, as required by section 303(d) of the federal Clean Water Act." (MN statutes, chapter 114D)

The law led to one-time appropriations in each of the past two biennia (\$24.95 million in FY2007 and \$54 million in FY2008-09), [and the passage of the Clean Water, Land, and Legacy Amendment in 2008 established the Clean Water Fund \(appropriating \\$151 million in FY2010-11\),](#) for the following activities:

- Accelerate assessment of Minnesota's waters with a goal of comprehensive assessment of the state every 10 years.
- Develop TMDLs with an emphasis on 3<sup>rd</sup> party projects led by local government and other local agencies.
- Provide grants to implement TMDLs and protection activities through existing state and local programs designed to improve water quality.

### **MPCA Program Development Priorities for FFY2009-2012:**

#### **1. Administer Clean Water Council**

The CWLA created a governor-appointed Clean Water Council, a 23-member citizen/state agency advisory group which advises on the administration and implementation of the Clean Water Legacy Act, including making recommendations to the Governor on the appropriation of funds, and to the MPCA on the prioritization of TMDLs and other program/policy development issues. The inaugural meeting of the Council was held in March 2007.

Over the next four years, the MPCA will continue to provide administrative and policy support for the Council and its Work Groups, including meeting planning and follow-up, maintenance of Council's website, report writing and processing, guidance on policy and program budgets, and special projects. The Council has legislative reports due in December 2008 and 2010. These reports will be provided to EPA for information.

#### **FFY2009 Report:**

The December 2008 Clean Water Council biennial report was completed on time. It can be found at: <http://search.pca.state.mn.us/query.html?charset=iso-8859-1&style=joomsearch1&col=newsite&qt=December+2008+Clean+Water+Council+biennial+report>.

#### **FFY2010 Report:**

A Clean Water Council Legislative Update was published in December 2009. The Council's by-laws were updated in June 2010. Both documents are available at: <http://www.pca.state.mn.us/index.php/about/mpca/mpca-overview/councils-and-forums/clean-water-council/clean-water-council-publications.html?menuid=&missing=0&redirect=1>

## **2. Develop Statewide Watershed Approach to prioritize and integrate Monitoring and Assessment, TMDL, and Restoration and Protection Activities**

The CWLA called for the Clean Water Council to develop prioritization strategies for restoration and protection activities. Over the next four years, the MPCA will be designing and putting in place a new prioritization strategy, which was endorsed by the Council in 2008. The goal of the strategy is to increase efficiency and predictability through a watershed management system that integrates monitoring and assessment, TMDL, and restoration and protection activities.

Based on organizing activities on the major watershed scale (i.e. primarily 8-digit level Hydrologic unit Code (HUC), with some exceptions), the MPCA is exploring ways to synchronize TMDL development and implementation in major watersheds within 2-3 years follow monitoring and assessment of the same watersheds. The current plan is to complete assessment of all 81 major watersheds over a 10-year period, at a rate of 8 watersheds per year. TMDL studies will begin 2-3 years following completion of assessment. The planning process will ultimately result in a watershed plan that integrates both restoration and protection implementation activities, consistent with EPA's watershed planning (9 element watershed plans) approach.

While the MPCA has completed several years of pilot and now fully standardized monitoring work using this approach, the MPCA is in the early stages of planning the fully integrated approach to our water work, and will be working on pilot projects and other design activities over the next few years. The MPCA will begin to pilot this watershed planning concept in the Buffalo River Watershed and Cannon River Watershed beginning in FFY09 through FFY10. These projects are of great interest to EPA in terms of transferability to other states and regions. EPA will be included in this process and will work with MPCA to help find ways to help highlight protection efforts.

#### **FFY 2009 Report:**

The MPCA is making good progress on integrating the watershed approach into its operations. Link to the Watershed Approach Fact Sheet Summary is posted at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/basins-and-watersheds/watershed-approach.html>

Design and initial implementation of stressor identification monitoring, watershed modeling, implementation planning, and related activities continues. Pilot projects in the Cannon River and Buffalo River Watersheds are underway. Selection of state fiscal year 2010 and 2011 TMDL projects emphasized full watershed projects, moving more and more away from reach-by-reach TMDLs. Scheduling of the 2010 Impaired Waters list was done by grouping listings into full watershed projects as much as possible.

The Buffalo River Watershed Project is a pilot project for the development of a methodology to guide surface water quality management activities based on an 8-digit HUC. The project will encompass a wide range of activities and goals directed at the restoration of impaired waters and the protection of surface waters within the watershed where water quality conditions meet water quality standards. The local project sponsor is the Buffalo Red River Watershed District. End products of the project will include the assessment of all surface waters within the watershed, the implementation of a very extensive local stakeholder involvement/public participation process, the development and implementation of a stressor ID process, the development of a multi-parameter watershed-wide TMDL report, the development of a TMDL implementation and protection plan for appropriate areas throughout the entire watershed, and the linking of all these products into the watershed districts 10-year management plan. Phase 1 of the project was initiated in March of 2009 and runs through October of 2010. It is anticipated that the entire project will take 4 to 5 years to complete. Activities undertaken up to this point in time include: two years of surface water chemistry monitoring at 32 sites within the watershed; flow monitoring at 13 locations for 2 years; biotic monitoring at 13 sites (the MPCA's intensive monitoring program) for 1 year; the development of a civic engagement strategy geared towards maximizing the involvement of the watershed residents in the process; and, GIS activities. Two project kick off meetings were held in early summer to present and discuss the scope of the project with the local citizenry and the members selected for participation on the various local technical and advisory committees. The collection and review of relevant information (water quality data, local plans, and other relevant literature) has begun. Discussions have begun with technical advisory committee members, state agency staff, and the watershed district concerning what type of stressor identification process would be effective and timely given the size and the nature of the watershed.

A comprehensive Cannon Watershed Plan is being developed that will guide and coordinate implementation activities across political boundaries. The first step was completion of the Lower Cannon River turbidity TMDL implementation plan in October 2009 to ensure eligibility for restoration and protection funding. Currently the water planners from the multiple counties in the Cannon River Watershed are working together to create a unified vision of watershed management to share with stakeholders for comment.

#### **FFY2010 Report:**

The MPCA has modified its earlier thinking on the timetable of watershed efforts to compress the timeframe for TMDL completion. Rather than as stated above, "TMDL studies will begin 2-3 years following completion of assessment", TMDL study efforts, such as BASINS watershed modeling and stressor identification, will begin during assessment activities.

Watershed restoration (TMDL) and protection strategy development efforts are getting underway in several additional watersheds, beyond the Cannon and Buffalo Watersheds.

List of other Watershed restoration and protection strategy development efforts initiated (or planned) in federal FY2010—October 2009 through September 2010:

**Initiated:**

LeSueur  
Pomme De Terre  
Chippewa  
Root River  
Elm Creek  
Ramsey-Washington Metro Watershed District

**Planned:**

Snake River  
Mississippi River Red Wing (Vermillion River)  
Missouri Basin  
Cedar/Shellrock Rivers (often called Greater Cedar Basin)  
Whitewater River  
Cannon River  
Thief River  
Mustinka River  
Red Lake River  
Sand Hill River

Several more watershed projects have been allocated funding and are getting underway in early federal fiscal year 2011.

**Cannon River One Water Project Update**

Local Partner is Cannon River Watershed Partnership (CRWP).

**FFY2010 (October 2009 through September 2010):**

- October 14, 2009: Lower Cannon Implementation Plan was approved by the MPCA (this is an implementation plan for a specific TMDL project, but it was wrapped into the One Water Pilot contract; the project area is the entire Cannon River watershed).
- The *Cannon River Watershed Strategy Document* Table of Content was completed (providing an outline of the document), and the local partner began work on the document body.
- The *Cannon River Trends Report* was drafted by Minnesota State University (subcontractor).
- CRWP and partners developed an approach for identifying priority management zones – the following tools were employed:
  - Stream Power Index Analysis: identifies where areas of low and high erosion are likely.
  - Compound Topographic Index: identifies areas of lesser and greater “wetness”.
  - Shoreland Land Use Mapping, including non-public waterways such as drainage ditches.

**FFY2011 (October 2010 through September 2011):**

- MPCA and CRWP presented to all MPCA offices a Cannon River One Water Pilot overview/update on October 14, 2010. The presentation was well received, and good questions/discussion followed.  
(Contract ends June 30, 2011; the schedule for the remaining milestones is pasted below.)
- December 2010: *Cannon River Trends Report* completed.
- January 2011: Watershed Summit
  - MPCA Watershed Approach Presented.
  - Draft of Watershed Management Strategy.

- January-May 2011:
  - Refine strategy based on feedback.
  - Determine PMZs with partners.
  - Present Cannon River Watershed Trends report to public around the watershed.
- June 2011: Watershed Management Strategy finished. Project ends.

**Update: On Watershed restoration and protection efforts for the Buffalo River Watershed Project completed in 2010 and proposed for 2011.**

**FFY2010:**

Activities continued or initiated in 2010 included the development of a GIS based stressor ID process (including field reconnaissance and channel morphological assessment in select pilot sub-watersheds), water quality and flow monitoring, review and analysis of available 2009 data, completion of the literature review, the development of a stakeholder/public involvement process, the development of a communication plan, numerous internal project team meetings and development of the workplan for Phase II.

**FFY2011:**

Proposed activities include the continuation of the stressor assessment process (including field reconnaissance and channel morphological assessments) for all sub-watersheds, further water quality and flow monitoring, data review and analysis, creation of the SWAT model for the watershed, beginning the development of flow and load durations curves, beginning creation of load and waste load allocations, continuing public involvement and stakeholder activities, the development of a lake classification system for critical lakes within the watershed, and beginning the development of a draft TMDL and watershed assessment for the watershed.

**3. Design and Implement an Effectiveness Tracking System**

The CWLA's implementation policies required agencies "to establish and report outcome-based performance measures that monitor the progress and effectiveness of protection and restoration." (114D.20, subd. 3(7))

Since December 2007, the MPCA has been working with state, federal and local partners, including EPA, on a process to develop an effectiveness measurement framework. The initial phase of this project concluded in the fall of 2008 and resulted in the design of a framework that will describe progress at different scale and time periods.

The next phase of this project, beginning in October 2008, will be to develop specific measures, a measurement tracking system, and pilot projects to evaluate the framework. To help implement this phase, the MPCA has volunteered to participate in EPA's pilot program effectiveness effort starting later this fall. The project will provide a consultant to assist the MPCA and its partner agencies and will require three years to complete. Concurrently, the MPCA will participate in a similar effort sponsored by the State of Indiana in early FFY09.

EPA intends to use this process as a model for other pilot states interested in tracking program effectiveness. This effort will involve significant resources from EPA WWB. However, this project will provide a benefit to other Region 5 states and to EPA, in terms of being able to better report program success and manage monitoring, planning and restoration resources.

#### **FFY2009 Report:**

The MPCA is participating in the EPA effectiveness measures project, and participated in the State of Indiana effort. The MPCA continues to work with the Clean Water Council on development of effectiveness measures. Also, the MPCA put out an RFP using "Stimulus" funds for assistance with enhancing Minnesota's ability to measure and communicate the results of TMDL development and watershed planning efforts.

#### **FFY2010 Report:**

The MPCA is working on watershed measures as a part of EPA's Region 5 pilot project and in response to the Clean Water Land and Legacy Amendment that passed in Minnesota. The work goes beyond EPA direction to include surface water, groundwater and drinking water. A framework has been created and populated with measures. Data on each measure is being gathered and testing various measures is underway. Even though additional work needs to be done, a work-in-progress report will be available in early 2011.

The Clean Water Fund Interagency Coordination Team Measures and Outcomes Subteam, using information from these and other measures development processes, began developing specific measures and measures metadata. These will be finalized by mid-FFY2011.

#### **4. Develop a Watershed Data Integration System**

To help track and report on effectiveness measures, among many other management needs, the MPCA is developing an information management system for elements of its watershed programs including: assessment and monitoring; administrative and financial; geospatial data and information; and TMDL development and implementation and protection efforts. When fully implemented over the next four years, the system will integrate and enhance existing and new databases, and connect them through an information portal. A business object model was completed for the project in 2007 and the initial design of system requirements will be completed by the end of FFY09. Further design and development will be conducted in FFY09 and FFY10 before the system is fully operational, but some important elements of the system will be completed as early as FFY10, with the full system completed by the end of FFY11. EPA will be looking for potential transferability of what is accomplished here to other states.

#### **FFY2009 Report:**

Business and system requirements were identified, and a report including the requirements and a plan for development of the full system was completed in FFY09. A contracts database selection project is underway in early FFY10 with the Minnesota Management and Budget Office. Two other components of the overall system will begin development in FFY10 - the "GIS" component and the "managing waterbodies" component. Another component, "workload management" has been deferred as a stand-alone project, and may be incorporated into an agency-wide project in the future.

#### **FFY2010 Report:**

While the original projection stated above was that "some important elements of the system will be completed as early as FFY10, with the full system completed by the end of FFY11," this timeline was overly optimistic. While high-level design work was completed in FFY10, elements of the system will not be built and implemented until FFY11. Full implementation will not occur until FFY13. A legislative report on progress to date is found at:

<http://www.pca.state.mn.us/index.php/about-mpca/legislative-resources/legislative-reports/index.html#2010>



## 5. Special Joint Projects with EPA

In addition to the effectiveness measures project discussed in #3 above, MPCA and EPA are working together on several nationally recognized special projects, supported in part by EPA HQ funding. Projects include the Minnehaha Creek Watershed Stormwater TMDL effort to assess BMP effectiveness, and the Lake Pepin TMDL Implementation Plan Nutrient Reduction Strategy to reduce hypoxia problems in the Gulf of Mexico. Also, the MPCA has participated in EPA's national effort to develop guidance linking stormwater TMDLs and NPDES permits, which is due in early FFY10. The MPCA will continue to need to work with EPA to resolve stormwater policy and permitting issues over the next four years.

### FFY2009 Report:

Minnehaha Creek – Lake Hiawatha TMDL and Stormwater BMP Optimization Tool Development: This project is collaboration between MPCA, EPA and the Minnehaha Creek Watershed District. Work in FFY09 focused only on the TMDL development. At this early stage partners are evaluating the available data and characterizing the watershed with respect to land use, hydrology and pollutant sources. The project held a kick-off meeting with stakeholders to present this information and discuss the plans for the project.

Lake Pepin Joint Special Project - Tetra Tech is finalizing the documentation of candidate BMPs to evaluate in the SWAT modeling, having circulated it among Minnesota state agencies for comments. The University of Minnesota has begun to develop SWAT models calibrated to N, P and TSS in the Beauford Ditch and Seven Mile Creek Watershed.

MPCA's construction and draft industrial stormwater permits link TMDLs and TMDL implementation plans to permit requirements. Likewise, MPCA's draft Phase 1 MS4 permits contain language linking impaired waters and TMDLs to permit requirements. MPCA has developed guidance and policy on writing TMDLs that link to stormwater permits.

### FFY2010 Report

Lake Pepin Special Joint Project: The purpose of this project is to generate information for an implementation plan for the Lake Pepin watershed which will address nitrate nitrogen, a concern for Gulf of Mexico hypoxia, along with total suspended solids and phosphorus, which are pollutants being addressed in TMDLs for Mississippi River and Lake Pepin impairments. The SWAT model is being used in two small watersheds, Seven Mile Creek and Beauford Ditch watershed, to simultaneously address these three pollutants in highly agricultural watersheds. Considerable time elapsed awaiting the availability of a new version of SWAT conformable with DRAIN MOD, which would help to include tile drainage in the modeling. Attempts to use this new version proved unsuccessful, and the University of Minnesota modelers reverted to an earlier version of SWAT which is performing satisfactorily. A thorough literature review was conducted to identify potential BMPs to evaluate in modeling runs. These were summarized in a Tetra Tech report. Model calibration and validation is expected very soon, after which modeling scenarios can be run and evaluated.

Minnehaha Creek and Lake Hiawatha TMDL and Stormwater BMP Optimization Tool Development: This project concerns creek impairments for biota (fish), chloride and E. coli bacteria; the lake, which the creek flows into, is impaired due to excess nutrients (phosphorus). The MPCA funded the first half of the study using the contractor Tetra Tech and completed a data gap analysis, a watershed characterization and a source assessment. EPA then contracted with Tetra Tech and is completing a linkage analysis and the Total Maximum Daily Load study. In addition, this second phase will include as a pilot study use of a stormwater best management practice optimization tool to help identify implementation opportunities. The project team has convened periodic meetings with stakeholders in the watershed to solicit feedback as work is being done.

MPCA submitted comments on EPA's *TMDLs to Stormwater Permits Handbook* on December 2, 2008. EPA has not finalized the Handbook but it remains available as a Draft report. MPCA's Stormwater and TMDL programs continue to work with EPA to resolve TMDL-stormwater permit issues as they arise. For example, in 2010, EPA reviewed and provided comments on MPCA's guidance document *Guidance on What Discharges Should be Included in the TMDL Wasteload Allocation for MS4 Stormwater* and met with MPCA staff to discuss proposed approaches for addressing TMDLs in the next Phase 2 MS4 General Permit. MPCA will continue to work with EPA during FFY11, including continued discussions on the Phase 2 General Permit and discussions on EPA's November 12, 2010 memo *Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs."*

## 6. Other Program Development Activities

- Training: The latest of 12 modules of an impaired waters training program for internal staff and external customers will be completed and web-posted in FFY09. Other modules will be considered in the years ahead as needed. EPA conducted two training sessions on TMDLs for MPCA and stakeholders in FFY08, and will likely be asked to conduct more sessions over the course of the next few years as MPCA expands its program.
- TMDL Development Protocols: To date, four TMDL development protocols have been completed for the parameters of low dissolved oxygen, bacteria, excess nutrients in lakes, and turbidity. Updates to some of those protocols are scheduled in FFY09. Also in FFY09, a new protocol for impaired biota TMDLs will be completed.
- Master Contract for TMDL Consulting Services: The MPCA utilizes private consultants in completing TMDLs. The MPCA has prequalified consultants and established a Master Contract for use of those firms selected to be in the consulting pool. The 2<sup>nd</sup> 5-year master contract will expire and the 3<sup>rd</sup> Master Contract will be put in place in FFY09.
- Protection Strategy: A Protection Strategy for unimpaired waters has been drafted by an interagency work group and is expected to be endorsed by the Clean Water Council in FFY09. EPA is very interested in this at the Regional and National levels. EPA will engage MPCA to explore ways to give credit for active watershed protection planning and implementation efforts.
- Region 5 TMDL Practitioners Workshop: Minnesota will host the 2009 Workshop and plans on providing speakers on several topics, such as the Lake Pepin TMDL, other TMDL projects, stormwater policy, TMDL implementation, the watershed data integration project, or the effectiveness measures project, as requested.
- On-going policy development - The MPCA and EPA will continue to work together to resolve on-going policy issues that arise in conducting TMDLs, for example the application of concepts like "natural background conditions" and "site specific standards."

### **FFY2009 Report:**

Impaired waters training program modules for internal staff and external customers were completed and web-posted in FFY09 at:

<http://www.pca.state.mn.us/index.php/about-mpca/mpca-events-and-training/mpca-training-events-calendar.html>.

The bacteria TMDL protocol was updated and the impaired biota TMDL protocol was completed. Both are posted at:

<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/project-resources/tmdl-policy-and-guidance.html>.

We also began development of a protocol to guide TMDL implementation planning, and completion is targeted in FFY2010.

The TMDL Master Contract has been extended until January 29, 2010. The 3rd TMDL Master Contract is scheduled to take effect in February 2010.

The final draft of the protection strategy working document has been developed by the Clean Water Council's Prevention and Monitoring Work Group, but the document has not yet been discussed by the full Council. This discussion is anticipated to occur in FFY10.

The MPCA hosted the Region 5 TMDL practitioners' workshop in Red Wing, Minnesota in 2009 and the MPCA gave a variety of presentations. The workshop was well attended and received.

The MPCA and the EPA had several policy discussions in FFY09, including site specific standards and allocation strategies for the Lake Pepin TMDL, reasonable assurance, interstate and tribal issues.

#### **FFY2010 Report:**

- Aqua Terra Inc., (an EPA contractor) conducted training on the HSPF model in the BASINS environment, during the week of August 9-13, 2010. Sixteen MPCA staff and local consultants were part of this training and found it very worthwhile. EPA Region 5 made it possible to bring this training to Minnesota and covered the tuition for the MPCA staff who attended.
- A new TMDL development starter guide was published in FFY10, and can be found at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/project-resources/tmdl-starter-guide.html>.
- The 3rd TMDL Master Contract was executed in FFY10 (July 2010).

#### **TMDL Priorities:**

As of October 2008, the MPCA has received EPA approval of 1,103 TMDLs – 105 for waters impaired by conventional pollutants and 998 for mercury-impaired waters. The MPCA exceeded its PPA commitment of 100 TMDLs in FFY08, submitting 516 TMDLs to EPA for approval. This included 501 TMDLs for mercury and 15 for conventional pollutants.

#### **MPCA TMDL Priorities for FFY2009-2012:**

The 2007 legislative session saw an appropriation of an additional \$18 million for the FY08-09 biennium to the MPCA to develop Total Maximum Daily Load Studies (TMDLs). This funding, along with funding from the 2006 legislative session, has been a big boost to reducing MPCA's TMDL backlog and enabled the agency to hire staff critical for technical and administrative support. As a result, by the end of 2008, TMDL projects addressing nearly 50 percent of listings for conventional impairments are now underway.

To continue this progress, the Clean Water Council is advising the Governor and the Legislature to continue TMDL appropriations at the \$18 million level for FY2010-2011 (July 1, 2009-June 30, 2011). The MPCA believes that this funding will enable it to complete most of the projects it has underway and meet its annual commitment to the EPA over the next four years.

The number of specific conventional parameter TMDLs that MPCA is to submit to EPA in FFY09 is 60, and subsequent annual goal numbers will be provided under separate cover to EPA by November 1<sup>st</sup> of each year for review and approval, and are incorporated into this document by reference. The MPCA is working with EPA on an approach to PCB impairments, which will involve either a re-categorization of PCB impairments to CALM 4b on the 2010 impaired waters list, or submittal of a PCB TMDL in FFY09.

### **FFY2009 Report:**

The MPCA received a legislative appropriation for FY10 and FY11 of \$18 million as requested.

The MPCA received approval from EPA for 11 TMDL projects addressing 61 listings, meeting the goal of addressing 60 listings in FFY09.

For FFY10, the MPCA again proposes a goal of 60 listings addressed. The MPCA intends to add over 30 listings to the mercury TMDL on the 2010 list. As of October 2009, the MPCA had 7 projects on public notice addressing 16 listings, and had 7 projects addressing another 21 listings at EPA for preliminary review.

MPCA submitted a draft PCB TMDL, but then followed with a 4B designation request. EPA indicated to MPCA that the 4B request did not provide enough information but did not specify what was missing. MPCA is following up with EPA to see what would need to be done to the 4B request to make it acceptable, and then will decide either to go forward with it, or revert to a TMDL.

### **FFY2010 Report:**

There were 15 TMDL reports, including 132 approved TMDLs.

### **EPA comments:**

The approach for addressing PCB impairments should be revisited in FFY11.

### **Other TMDL Priorities:**

- **Lake Pepin TMDL:** The Lake Pepin TMDL project is nearing completion and it will be placed on public notice in FFY09. The MPCA will continue to brief EPA Region 5 staff on the project's progress. As noted above in the program development section, we will also be working closely with EPA on a nutrient reduction strategy utilizing implementation activities for the Lake Pepin TMDL. Close coordination is needed on NPDES issues, including items such as stormwater allocations and timing of wastewater permit revisions.

The agency is finalizing documents for public notice of two site-specific standards: for Total Suspended Solids/Submersed Aquatic Vegetation in the Mississippi River from the Minnesota River confluence through Lake Pepin; and eutrophication of Lake Pepin. We are conducting an additional run of the Upper Mississippi River-Lake Pepin model, using output from Scenario 4 of the HSPF model for the Minnesota River basin to Jordan, linked to CEQUAL2 model for Metro Minnesota River transport to the Mississippi River. Results, expected any time now, will tell us what would happen if we should meet the TSS standard for the Mississippi but allowed TP discharges from metro area point sources to expand to permitted capacity. We expect to begin public notice of the site-specific standards in December 2009 or January 2010 for 45 days, respond to comments, in Feb-March 2010, go to MPCA Board in April or May 2011, and send the final documents to EPA in May or June 2010. Upon EPA approval, we would then public notice the TMDLs in August or September 2010.

- **Watershed DELTA:** The MPCA will be implementing a new database called "Watershed DELTA". This will be one of the components of the watershed data integration system (mentioned above) but will be operational in FFY09. It will track TMDL financial and project information, as well as similar information for other watershed programs, and should also be very helpful for our reporting needs.

### **FFY2009 Report:**

The Lake Pepin TMDL will go on public notice in 2010. Watershed DELTA became operational in FFY09.

### **FFY2010 Report:**

Lake Pepin TMDL: The MPCA adjusted its approach on the Lake Pepin TMDL in the latter half of 2009, in order to focus on the development of site-specific standards for TSS in the Mississippi River, and for eutrophication in Lake Pepin, tasks that have taken considerable time and effort and are essential prerequisites to TMDL development. A set of criteria for Lake Pepin eutrophication have been developed in the context of nutrient standards for the Mississippi River and its tributaries, as part of the MPCA's triennial review of standards. These standards are being prepared for public notice and submission to EPA. The MPCA developed a site-specific standard for TSS – 32 mg/L as a seasonal mean at Lock and Dams 2 and 3 – which were approved by EPA on Nov. 8, 2010. The agency has also submitted a preliminary draft TMDL for TSS in the South Metro Mississippi River. Once comments have been received and incorporated, the agency plans to public notice the TMDL in early 2011. The agency anticipates that public notice and eventual approval of the phosphorus and chlorophyll criteria for Lake Pepin will take several months longer. However, a considerable amount of information has been gathered for the Lake Pepin TMDL, and the agency will be able to proceed promptly once the site-specific standard receives final approval.

### **Implementation Priorities:**

Through Clean Water Legacy Act appropriations, a total of over \$30 million in nonpoint source restoration and protection funds has been allocated to other state agencies since 2007. In addition the MPCA has committed a total of \$4 million of its CWA section 319 funds for TMDL implementation, including \$1 million in FFY07 and FFY08, and \$2 million in FFY09.

This funding is available to local government agencies in watersheds with both an approved TMDL and implementation plan, so there is a strong incentive to get both of these plans done as quickly as possible. However, demand continues to outpace available funding. To help reduce this gap, the Clean Water Council is recommending a near tripling of funding for the FY2010-2011 biennium for nonpoint source restoration and protection funding.

### **FFY2009 Report:**

MPCA is granting over \$3.4 million in FFY10 Section 319 funds.

The state Board of Water and Soil Resources is allocating over \$13 million for implementation projects in FFY10. Projects with completed TMDL implementation plans or identified in local water plans will receive high scores in prioritization of applications for over \$8 million of the funds.

### **MPCA Implementation Priorities for FFY2009-2012:**

- Implementation Plan development: The MPCA will continue to work with local government to develop implementation plans within one year of EPA approval of the TMDL. For most TMDLs, however, implementation plans are being developed concurrently with the TMDL in order to expeditiously apply for state funding through the Clean Water Legacy Act. Guidance for implementation plan development, utilizing the EPA 9 elements of watershed plans, will be completed in FFY09. EPA is very interested in this guidance and will be involved in the development process. This guidance may be transferable to other states.
- Improve Civic Engagement in restoration and protection: The MPCA will be working closely with the Clean Water Council on initiatives to improve the participation of citizens and stakeholders in restoration and protection activities. The Council is recommending state funding for needed research, pilot projects in key watersheds, and to evaluate a statewide media campaign.

- Implementation Grant Funding Priorities: The Clean Water Legacy Act specifies criteria for allocation of implementation funding. The MPCA will be working with other state agencies and the Clean Water Council to develop more specific ranking criteria, including prioritizing of some funding to threatened waters and watersheds.
- Continue integration of TMDL wasteload allocations into stormwater and wastewater permits. In addition to the Minnehaha Creek Watershed stormwater pilot project with EPA mentioned above, the MPCA is conducting policy discussions on the reissuance of the industrial stormwater permit in FFY10 and the MS4 permit in FFY11 to seek opportunities to improve the impaired waters requirements of these permits. We will also be working with stormwater staff on pilot projects and guidance to improve implementation of TMDL requirements. The stormwater program now has two liaison staff leading these efforts. The wastewater program has one liaison staff assigned to coordination duties and will be working on a policy and communications agenda over the next four years.

### **FFY2009 Report:**

As of September 2009, MPCA has approved 20 TMDL implementation plans.

Guidance for TMDL implementation plan development, utilizing the EPA 9 elements of watershed plans, will be completed in FFY10.

The MPCA is working closely with Clean Water Council civic engagement sub team. The state legislature appropriated \$250,000 for FY10-11 for this program development work to continue. The development work includes defining basic requirements for civic engagement and providing resources to ensure the basic requirements are implemented statewide. Also, MPCA put out an RFP using "Stimulus" funds for assistance with promoting civic engagement in watershed planning and Total Maximum Daily Loads (TMDLs).

The MPCA implemented Clean Water Council recommendations for priorities in scoring and allocating FFY10 Section 319 funding, and gave priority to protection projects in FY10 Clean Water Partnership funding.

Coordination is ongoing between the TMDL program area and the stormwater and wastewater programs. The MPCA and EPA are developing a potential watershed stormwater permit pilot for a Watershed District in the east Twin Cities Metro Area in FFY10. The MPCA produced a policy on nonpoint discharges to regulated MS4s. MPCA produced guidance on writing TMDL implementation plans that have a regulated stormwater component. The MPCA produced several fact sheets describing regulated stormwater BMPs that can be included in a TMDL Implementation Plan. The MPCA staff has developed a guidance document and TMDL language intended to assist NPDES permit writers to appropriately interpret wasteload allocations for the development of water quality based effluent limitations. The language will appear in TMDL wasteload allocation and implementation sections starting in FFY2010.

### **FFY 2010 Report:**

There were eleven MPCA approved Implementation Plans in FFY10.

The Stimulus RFP was published on September 28, 2009, and grants awarded by January 31, 2010. Each funded project will be required to provide reports and meeting records documenting the findings and results from the projects. The grants will end September 30, 2011. As of September 30, 2010, a cumulative total of \$30,807.23 has been spent by the three sub recipients.

Implementation Guidance/Protocol is still under development. (EPA asked why the delay?)

**MPCA response:** The Implementation Protocol was delayed because of the shift from a single TMDL focus to a Major Watershed based approach. Additionally an effort is underway to bring further focus to the Priority Management Zones and the Implementation Protocol will be significantly enhanced by that effort.

The guidance will address two broad areas; regulated point sources and non-regulated sources. The focus of the guidance will be on defining Priority Management Zones and activities and how to phase-in implementation activities.

Implementing the *Pilot Watershed-Based Stormwater Approach (PWBSA)* project in the RWMWD embarks upon a new direction for urban runoff management in Minnesota. The *PWBSA* is based upon key outcomes from:

- 2006 *Framework* (<http://www.bwsr.state.mn.us/publications/WBframework.pdf>) and
- 2008 *Integrated* (<http://www.bwsr.state.mn.us/publications/stormwater04-07-08.pdf>) reports.

The reports addressed regulatory permit approaches from both federal and state perspectives and identified issues needing additional exploration. This project responds to specific recommendations in the *2008 Integrated* report and builds-upon an important discussion in the National Academy of Sciences, National Resource Council [NAS/NRC] report (*Urban Stormwater Management in the United States, A Pilot Program as a Stepping Stone*, pp. 519-524; <http://www.nap.edu/catalog/12465.html>). The two-phased project will be completed over the next one and half to two years.

**Improve Civic Engagement in Restoration and Protection:** The MPCA worked closely with the Clean Water Council during 2008-2009 on initiatives for improving civic engagement in watershed projects and TMDLs. In 2010, the Council recommended that the legislature provide funding for needed research and development in this area, as well as for hiring staff to organize citizens and stakeholders within watershed projects.

The MPCA is following the Clean Water Council recommendations by developing a host of products and services for watershed project staff to use to: 1) ensure early citizen involvement in all projects, 2) develop local leaders that can develop local support for improving water quality, and 3) develop the civic infrastructure that will ensure sustainable local support for protecting and restoring water quality. The state legislature appropriated \$250,000 for the FY11-12 biennium for this program development work. The MPCA has asked for \$300,000 for the FY2012-13 biennium to continue these efforts.

**Additional information:**

For more information on the Impaired Waters Joint Priority, contact:

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At EPA Region 5: Dean Maraldo at 312-353-2098, or [maraldo.dean@epa.gov](mailto:maraldo.dean@epa.gov).

## ***WQ Monitoring***

**October 1, 2008 – September 30, 2012**

### **Objective:**

The MPCA and EPA Region 5 propose to collaborate to enhance our monitoring and assessment efforts so that each agency will have sufficient data available to assess the condition of the states' waters, identify stressors and sources of water quality impairments/threats, and measure changing environmental conditions to support Clean Water Act program needs and track our progress protecting and restoring water quality.

### **Statement of Environmental Problem/Issue:**

Effective and comprehensive water quality monitoring is an essential part of our environmental protection and restoration efforts. Monitoring information is needed to assess the condition of water quality within a State or the Region, identify pollutant sources/threats, detect new and emerging water quality problems and evaluate and inform the effectiveness of water quality protection and restoration programs. Data management and reporting are also key to ensuring the data collected is available to partners and stakeholders, and also that partners and stakeholders can contribute their monitoring data to assessment and management efforts.

The passage of the state Clean Water Legacy Act (CWLA) in 2006 significantly increased the State of Minnesota's investment in and support of water quality monitoring. The law led to one-time appropriations for fiscal years 2007 through 2009 (\$24.95 million in FY2007 and \$54 million in FY2008-09) for the following activities:

- Accelerate monitoring and assessment of Minnesota's waters with a goal of comprehensive assessment every 10 years.
- Develop TMDLs with an emphasis on 3<sup>rd</sup> party projects led by local government and other local agencies.
- Provide grants to implement TMDLs and protection activities through existing state and local programs designed to improve water quality.

With this heightened level of effort comes a greater need for support and flexibility from EPA in conducting water monitoring activities in a manner that meets both state and federal expectations.

The passage of the CWLA and associated funding has allowed the MPCA to make significant progress implementing the lake and stream components of the 2004 Minnesota Water Monitoring Strategy. Continued attention is needed during this PPA cycle to maintain this progress, and to further develop Minnesota's monitoring and assessment activities. Identifying monitoring and assessment as a joint priority for the next four years will provide continued focus and attention on collecting and managing the data necessary for both agencies to better understand the quality of the state's rivers, streams, lakes, wetlands and groundwater and to target future work. Identification of data management and integration needs will help the EPA and the MPCA effectively target resources, programs and efforts on the most significant environmental problems and achieve measurable environmental outcomes.

### **MPCA Monitoring and Assessment Priorities for FFY2009-2012:**

#### **1. Continue to implement the 2004 Minnesota Water Monitoring Strategy.**

Continue implementation of the Minnesota Water Monitoring Strategy, including continued coordination among the Minnesota Department of Health (MDH), Board of Water and Soil Resources (BWSR), Minnesota Department of Natural Resources (MDNR) and the Minnesota Department of



Agriculture (MDA) on surface- and ground-water monitoring. Continue to identify and prioritize gaps that need to be filled, and identify and target additional resources that would be needed to fill the remaining gaps (funding to be provided as available). Additional activities under this priority include the following:

- Identify additional training, guidance and tools that are needed to improve monitoring programs within the state and EPA.
- Attend and participate in the annual Surface Water Monitoring and Standards Meeting.
- Refine the Water Monitoring Strategy to reflect the watershed approach (see next priority), and determine if any additional changes are needed to measure attainment or progress toward our shared environmental goals for water including those in EPA's Strategic Plan and those identified in MPCA's Monitoring Strategy.

#### **FFY2009 Report:**

MPCA continued to refine the details of the Water Monitoring Strategy, including the watershed approach. A "condition monitoring" site was added to the MPCA web site <http://www.pca.state.mn.us/index.php/water/water-monitoring-and-reporting/water-quality-and-pollutants/water-quality-condition-monitoring/water-quality-condition-monitoring.html> and the strategy was posted there along with supporting documents and details. Staff attended and presented at the annual SWiMS meeting in February 2009.

#### **FFY2010 Report:**

Establishment of the Clean Water Fund Interagency Coordination Team at the assistant commissioner level has placed a strong emphasis on interagency coordination. Several subteams have been tasked, including a Surface Water Monitoring and Assessment Subteam and a Groundwater/Drinking Water Subteam, both of which the Agency is an active member.

Development of a subwatershed load monitoring network operating on a rotating watershed basis is under interagency coordination. The primary focus of the network would be to provide data to better enable watershed modeling and stressor identification. A "sentinel watersheds" network is also under interagency consideration, as primarily an effectiveness monitoring tool.

The Milestones Monitoring Network will be sunset in early FFY11 as it wraps up its latest 10-year cycle. Resources from the Milestones program will be redirected to support intensive watershed monitoring.

The Water Monitoring Strategy will be updated in early FFY11 to more explicitly reflect the watershed approach and current priorities.

## **2. Develop a statewide Watershed Approach to prioritize and integrate Monitoring and Assessment, TMDL, and Restoration and Protection Activities:**

Under the CWLA and the Minnesota Water Monitoring Strategy, the MPCA is relying on a watershed approach to monitor and understand lake and stream water quality. The idea behind the watershed approach is to intensively monitor the streams and lakes within a major watershed to determine the overall health of the water resources, identify impaired waters, and identify those waters in need of additional protection efforts to maintain high quality and prevent impairments. Follow-up monitoring is done in biologically impaired subwatersheds to determine the cause(s) of the impairments (the "stressors" impacting the biological community) and to begin to identify pollutant sources.

The watershed approach is not just applicable to monitoring and assessment. The MPCA is exploring ways to synchronize TMDL development and implementation in major watersheds within 2-3 years

follow monitoring and assessment of the same watersheds. The current plan is to complete assessment of all of the state's major watersheds over a 10-year period, at a rate of about 8 watersheds per year. TMDL studies will begin 2-3 years following completion of assessment. The planning process will ultimately result in a watershed plan that integrates both restoration and protection implementation activities, consistent with EPA's watershed planning (9 element watershed plans) approach.

Over the next four years, the MPCA will rely on pilot efforts and other design activities to fully integrate the watershed approach into our water work. The information gained through the watershed monitoring approach will help inform this broader design effort.

### **FFY2009 Report:**

The 2009 Minnesota Legislature provided funding to fully implement the watershed monitoring approach in state fiscal years 2010 (beginning July 1, 2009) and 2011. The MPCA is making good progress on integrating the watershed approach into its operations. Link to the Watershed Approach Fact Sheet Summary is posted at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/basins-and-watersheds/watershed-approach.html>. Design and initial implementation of stressor identification monitoring, watershed modeling, implementation planning, and related activities continues.

Intensive watershed monitoring was initiated in seven additional major watersheds. A process for annually updating the watershed schedule was also developed; the schedule will be updated each spring. A short document (Watershed Monitoring Approach Report) describing the watershed monitoring approach was also finalized, and is available on the MPCA web site at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/basins-and-watersheds/watershed-approach.html> along with a summary of condition monitoring activities completed in 2008 (2008 MPCA Condition Monitoring Summary), available at: <http://www.pca.state.mn.us/index.php/water/water-monitoring-and-reporting/water-quality-and-pollutants/water-quality-condition-monitoring/water-quality-condition-monitoring.html>

Numerous presentations were provided to agency partners and stakeholders to explain the watershed monitoring approach.

### **FFY2010 Report:**

Intensive Watershed Monitoring has proceeded in 24 watersheds, nearly 30 percent of the state. Watershed reports based largely on this monitoring (beyond the pilot Snake River Watershed report) will begin being produced in FFY11. The major watershed load monitoring network has been in operation since 2007, and will begin reporting findings in FFY11.

The Agency worked on revising its Continuing Planning Process (CPP) document to reflect the watershed approach to the Water Program. The CPP will be finalized in early FFY11.

### **3. Continue to develop tools for stream biological monitoring and assessment:**

The MPCA has developed and is implementing a robust stream monitoring effort that integrates biological, chemical and physical monitoring to assess stream condition. Continued work is needed to finalize a statewide stream classification system, develop an IBI for each stream type and establish a biological condition gradient for the state. Technical support and funding are needed from EPA to

continue progress in this effort, so the goal of achieving a “Level 4” biological monitoring program, including establishing a Tiered Aquatic Life Use (TALU) classification system, can be met for Minnesota.

**FFY2009 Report:**

The Minnesota state-wide biological database has been analyzed to develop 7 fish and 9 invertebrate classifications to minimize natural variability within them. Custom indices of biological integrity (IBIs) are being developed for each one of these classes (expected to be completed by spring 2010). In addition, biologists from around the state have met twice in 3-day workshops to develop bio condition gradients to help determine the appropriated thresholds for biological condition in each of these classes. These were facilitated and technically supported by MPCA paid contractors and with EPA staff participation.

The MPCA continues to pursue the development of Tiered Aquatic Life standards. Public and stakeholder meetings were held to gather information to help develop the standards and the implementation plan.

**FFY2010 Report:**

Warmwater IBI development was completed, and the IBIs were piloted for stream assessments in five watersheds. Cold water IBIs for both fish and macro-invertebrates are under development, to be completed in winter of 2011. Work also continues on the development of TALU for Minnesota’s water quality standards, including an implementation plan.

**4. Continue to implement probabilistic monitoring:**

The MPCA actively participates in the National Aquatic Resources Surveys (National Lake Assessment Program (NLAP), National Rivers and Streams Assessment (NRSA), and also conducts its own probabilistic stream survey for the state. The stream sampling design has evolved from a rotating basin-scale approach (from 1995 to 2005) to an ecoregion-scale design coinciding with the NRSA in 2008-2009 and into the future. The MPCA is also leading a state-level wetland quantity and quality survey with support from an EPA grant. Continued technical and financial support is needed from EPA to design and implement probabilistic monitoring efforts. The MPCA will continue to participate in the national survey effort, completing the NLAP data analysis as data becomes available, assisting in the NRSA, and participating in the National Coastal Condition Assessment and National Wetland Condition Assessment planning and monitoring efforts over the next four years.

**FFY2009 Report:**

MPCA staff and leadership participated in planning efforts for the National Coastal Conditions Assessment. Site reconnaissance was also completed for the NRSA. Using 106 Monitoring Initiative funding the MPCA will be conducting its own probabilistic survey of streams at 150 sites in 2010. These sites were randomly picked by EPA statisticians. Fish and invertebrate community, mercury in water, and emerging pharmaceutical and personal care product chemicals will be sampled.

**FFY 2010 Report:**

Coastal monitoring was completed during the 2010 field season under the auspices of EPA. The MPCA completed its probabilistic stream monitoring during the 2010 field season. The MPCA participated in the planning of the National Wetlands Condition Assessment and in 2011 will be completing the fieldwork at 22 sites and 2 site revisits, as well as portions of the laboratory work. The MPCA has been actively involved in the steering committee for the National Lakes Survey in preparation for the 2012 field season.

**5. Support the development and implementation of the Minnesota Wetland Monitoring Strategy:** Minnesota has drafted a strategy that includes, 1) Random plot sampling (quality and quantity), 2) Update of the National Wetland Inventory, and 3) An electronic GIS tracking inventory. During the next four years, the MPCA will implement the water quality sampling strategy, look for collaborative funding for the NWI update and tracking system with MDNR and BWSR and seek permanent funding for the random monitoring. Continued technical assistance and competitive funding opportunities are needed from EPA to help support this ongoing effort.

**FFY2009 Report:**

The probabilistic sampling for both the quantity of wetlands and the quality of wetlands has been completed for the first 3-year rotation with a report expected to be completed by spring 2010. Long term Minnesota Department of Natural Resources funding has been secured to continue the wetland quantity parts of the survey. EPA Wetland Development Program grant partially funded the sampling to determine the quality of depressional wetlands by the MPCA staff which is being discontinued. An additional source of funds is needed.

State funds were obtained for the 2009-2010 fiscal years to update the National Wetland Inventory in the 7 county metro areas. Additional funding has been sought to continue the update in more counties.

A contractor has completed a feasibility report for the GIS tracking inventory system. No funds are available to implement it at this time.

**FFY2010 Report:**

The MPCA has participated in the planning for the 2011 field season National Wetlands Condition Assessment. The MPCA is determining how to incorporate wetland monitoring addressing plants and invertebrates into the rotating intensive watershed monitoring approach to begin in the 2012 field season.

**6. Continue to enhance data management and access to water quality monitoring data, including spatial information:**

The MPCA is in the process of developing a replacement system to the EPA STORET water quality data management system. The MPCA is participating in a multi-state consortium to develop a replacement (with EPA support), and is also identifying user requirements and opportunities for enhancing data access and retrieval while replacing the STORET system. Continued support from EPA is needed as this effort moves forward.

In addition to the STORET replacement effort, the MPCA is developing an information management system for elements of its watershed programs, including monitoring and assessment. This system will pull from existing databases such as STORET (or its replacement), the Environmental Data Access system and the Assessment Database (ADB), and may also involve the development new data systems to fill identified gaps.

A key element of the watershed information management system will be the use of geographic boundaries to organize and display information. To assist in this and help avoid confusion in the assessment and listing process as well, the MPCA is also interested in continued coordination and cooperation among MPCA, MDNR and EPA regarding the state's watershed boundary GIS data.

**FFY2009 Report:**

Efforts continued to identify a preferred strategy for replacing the STORET data system. The MPCA completed its involvement in the multi-state consortium, and also wrapped up the development of user

requirements for the replacement system. The requirements were compared to available options, and the MPCA is currently exploring the potential for purchasing a commercial software package to meet the identified needs.

Regarding the watershed information system effort, business and system requirements were identified, and a report including the requirements and a plan for development of the full system was completed in FFY09. A contracts database selection project is underway in early FFY10 with the Minnesota Management and Budget Office. Two other components of the overall system will begin development in FFY10 - the "GIS" component and the "managing waterbodies" component.

#### **FFY2010 Report:**

The MPCA purchased the EQulS system to replace STORET. EQulS will expand our data management capabilities, to also include data on groundwater from our remediation and ambient groundwater monitoring programs. Surface water data have been migrated from STORET into EQulS.

The MPCA and the MDNR will be replacing the Hydstra water quantity/flow database in FY11, in cooperation with the Twin Cities Metropolitan Council Environmental Services.

The Watershed Data Integration Project underwent further analysis and developed the vision of the future system further. The beginnings of the system will be made operational in FY11. A legislative report describing the progress made in FY10-11 is found at:

<http://www.pca.state.mn.us/index.php/about-mPCA/legislative-issues/legislative-reports/legislative-reports.html>.

#### **7. Continue efforts to assess and list impaired waters:**

The MPCA continues to submit a list of impaired waters to EPA following the Consolidated Assessment and Listing Method categories, and using the EPA Assessment Database (ADB). The MPCA's move towards a watershed approach to monitoring and assessment, TMDL, and restoration and protection activities may necessitate adjustments to the impaired waters listing process to achieve the desired integration among those activities. Refinements to the MPCA's copy of the ADB may also be needed to meet identified information needs.

Over the next four years, the MPCA will work with EPA to identify and implement opportunities to refine the listing process to align with the watershed framework while continuing to meet state and federal goals and requirements. MPCA will also continue to update its assessment approach and guidance based on new information and revisions to the state's water quality standards.

#### **FFY2009 Report:**

The 2010 listing cycle proceeded on schedule. Data analysis was completed in winter 2009, and professional judgment meetings were held during spring 2009. A series of public meetings on the draft list were held in late September/early October 2009. An effort to develop a watershed assessment approach was also initiated, and will be piloted in a few watersheds in winter 2010 to explore options for better aligning the assessment and listing process with the watershed framework in advance of the 2012 listing cycle.

#### **FFY2010 Report:**

The 2010 Impaired Waters List was submitted on schedule in Spring of 2010. Approval of the list by the EPA is expected by May 2011.

The MPCA continued its efforts to align its assessment process with the watershed approach. The MPCA developed and piloted an approach for conducting assessments on a watershed basis, whereby all the AUIDs with available data within a watershed are assessed at the same time following the intensive watershed monitoring effort. The MPCA is evaluating the results of the pilot assessments and further refining the process in anticipation of another round of data analysis and assessment, organized by watershed, in the second quarter of FFY2011.

**Additional information:**

For more information on the Monitoring and Assessment Joint Priority, contact:

At MPCA: Shannon Lotthammer (assessment) at 651-757-2537, or [shannon.lotthammer@state.mn.us](mailto:shannon.lotthammer@state.mn.us), or  
Glenn Skuta (monitoring) at 651-757-2730 or [glenn.skuta@state.mn.us](mailto:glenn.skuta@state.mn.us)

At EPA Region 5: Ed Hammer at 312-886-3019, or [hammer.edward@epa.gov](mailto:hammer.edward@epa.gov)

## ***Midwest Clean Diesel Initiative***

October 1, 2008 – September 30, 2012

### **Objective:**

Both agencies seek a well-coordinated effort to reduce diesel emissions, with clear and measurable outcomes.

### **Statement of Environmental Problem/Issue:**

Diesel engines emit a disproportionately higher amount of pollution than gasoline engines – especially particulate matter. Diesels also have a much slower fleet turnover rate due to their extreme longevity. The challenge is to reduce diesel emissions through a reduction in idling and retrofitting legacy diesel equipment, even though our state is in compliance meeting all federal air quality standards -- making any diesel retrofit a voluntary action.

### **Actions to be accomplished or Progress Update:**

1. The MPCA will provide loans to qualified small businesses for idle reduction devices.
2. Provide the EPA with a state diesel emission reduction plan by December 1, 2008 that will result in retrofits and idle reduction education for Minnesota's "legacy fleet" of school buses (currently estimated at slightly over 4000 buses) and other diesel fleets, and will establish substantial reduction targets for port equipment, heavy construction equipment and specific sector based initiatives, such as solid waste collection vehicles.
3. Establish financial support for the state diesel emission reduction plan by applying for federal grant awards, or state legislative initiatives, as appropriate. The MPCA's clean diesel program replaced the previous staff and supervisor as the program moved to a new MPCA unit on September 2.

### **FFY2009 Report:**

1. MPCA Clean Diesel Loan Program  
Originally, loans were offered for the items listed below through our Small Business Environmental Improvement Loan program. During the past three years the MPCA issued 70 loans totaling over \$787,000 for idle reduction equipment. Because of available DERA funding, the MPCA was able to create a dedicated loan program specific to idle reduction efforts. This has freed up funding from the Small Business Environmental Improvement Loan program to go toward dry cleaners and other small businesses for the purchase of equipment that meets or exceeds environmental regulations. Due to a grant program established through stimulus funding (ARRA), activity for the APU (idle reduction) loan program has been quiet. Recently however, one loan for idle reduction equipment has been awarded and two more are pending. Additional applications are expected in the near future.
2. Minnesota Clean Diesel Reduction Plan  
The MPCA, working with Clean Air Minnesota (CAM), the state's Clean Diesel Coalition, developed a Statewide Diesel Emission Reduction Plan in late 2008, which was then revised with EPA input in early 2009. **The overarching goals of this plan are to, 1) maximize diesel emission reductions by utilizing the most feasible, economical and appropriate technologies or processes, 2) obtain the greatest number of health, economic, and education co-benefits, 3) leverage public, private, local,**

**state and federal resources, and 4) identify opportunities for new partners and new emission-reduction work.** The plan also identified opportunities for work in various sectors, discussed what has occurred in some of these sectors, as well as objectives for 2009. Among these sectors:

- School buses: the MPCA continues to partner with Project Green Fleet (PGF), a program of the Minnesota Environmental Initiative (and a partner in CAM) through financial and technical support. This includes providing funds from the state Legislature, and the MPCA's standard Diesel Emission Reduction Act (DERA) state allocation. Progress continues and approximately 520 school bus retrofits will have been done in the 2009 calendar year instead of the original goal of 700. The goal had to be scaled back by MEI because both the state and DERA grant funding arrived later than anticipated. This will bring the cumulative project total of retrofit school buses to 1,800 by December 31, 2009. Additional federal funds have been secured by MEI to complete several hundred additional retrofits in 2010.
  - Other on-road fleets: Both the MPCA and PGF have expanded their work with other public and private on-road fleets through available DERA ARRA (American Recovery and Reinvestment Act), CMAQ (Congestion Mitigation and Air Quality), and other funding sources. The MPCA has continued implementation of the CMAQ federal grants for the Twin Cities metropolitan area public heavy duty retrofits. The MPCA has been working with MnDOT and several metropolitan county/ municipal fleets. As of September 30, approximately 200 public heavy duty vehicles have been retrofitted with many more slated for 2009/2010. The CMAQ project has expanded to include retrofits of Minneapolis and St. Paul City fire trucks – this bid award should be finalized through the Minnesota Department of Administration in November.
  - Off-road fleets: Through ARRA DERA funds, both MPCA and PGF will be able to expand retrofit efforts to off road equipment including construction, rail, and marine.
  - The MPCA added language to construction contracts (landfills, LUST projects) that requires winning construction bidders to reduce emissions through idle reduction practices and use of higher biodiesel blends.
  - Additionally, the MPCA also continues to work with PGF to encourage emission reduction language and possibly offer emission reduction grants (through MEI) for the construction equipment of contract bid winners on the Central Corridor Light Rail. A recent meeting with Central Corridor staff indicates a willingness to include some type of emission reduction requirement, or strongly encouraged language in future bid specs for various construction projects. Examples include reduced idling policies, emission control devices and the use of cleaner fuels.
  - Idle Reduction: the MPCA staff participated in 'fleet management events' throughout the state, called Clean Diesel Road Shows, which brought together public and private fleet owners interested in reducing diesel emissions through idle reduction practices. The Road Show events were coordinated by MEI and other CAM partners. The MPCA staff also participated in the 2008 and 2009 Midwest Clean Diesel Initiative Conference held in Region 5's Chicago office.
3. The MPCA continued to support school bus retrofits in the state by awarding an additional \$1.2 million in state funding in 2009 to Project Green Fleet, allowing for at least 550 additional retrofits by 2011. This is in addition to the \$1.2 million awarded to PGF in 2008 for school bus retrofits.
  4. The MPCA applied for and received \$1.73 million in ARRA-DERA funds awarded through the state clean diesel grant program in April 2009. These funds allow the MPCA to further the goals of the state's Diesel Emission Reduction Plan by offering financial resources to public and private fleets for diesel emission reduction work. The MPCA released an RFP for \$1.56 million available public and



large and small private diesel vehicles including long-haul trucks, marine and construction equipment. Categories included auxiliary power units (APUs), trailer refrigeration repowers, engine repowers and emission reduction retrofits. The grant was promoted through targeted associations and vendors along with mainstream news media. It was opened in June to public and private fleets of all sizes, and 125 applications were received. Applications were screened and categorized, followed by a random selection process by category with witnesses. These identified 61 grantees that were notified in August. Due to administrative delays, grant agreements were still in the process of being sent out as of September 30, 2009, but the MPCA is actively working to get agreements sent out.

MEI, one of MPCA's main partners in clean diesel work, applied for and received approximately \$3 million in ARRA-DEIRA competitive funds. These funds will be used to continue the work of the state's diesel emission reduction plan, including additional school bus retrofit work, as well as expanded retrofit efforts to other public and private on and off road fleets.

5. The MPCA has taken steps last fall to look into new diesel areas, by adding a \$57,000 pilot project to its DEIRA plan - aimed at reducing diesel emissions by repowering aircraft tugs used at MSP Airport.

#### FFY2010 Report:

- Originally, loans were offered for the items listed below through our Small Business Environmental Improvement Loan program. During the initial three years, the MPCA issued 70 loans totaling over \$889,000 for idle reduction equipment. Because of available DEIRA funding, the MPCA created a dedicated loan program specific to idle reduction efforts. Due to a grant program established through stimulus funding (ARRA), activity for the APU (idle reduction) loan program has been relatively quiet. During Federal Fiscal Year (FFY10), six loans totaling \$68,154 for idle reduction equipment were issued.
- The ARRA (stimulus) Grant award generated nearly 70 projects that began being implemented in January, 2010. Additional MPCA staff were directed to help support the grant.
- Due to a parts shortage, but mostly due to the downturn in the economy and its effect on grantees – the MPCA (like most other states), requested and received an extension through the end of March, 2011 for completion of \$1.57 million in projects for the ARRA Grant.
- In the past year, twelve MPCA quarterly reports sent to the EPA were completed for the ARRA Grant and another four were completed for the DEIRA Grant.
- The MPCA has cooperated with an EPA audit and site visit for the ARRA Grant. The first EPA review had no problems. The site visits included a large fleet with APU installs in progress and a tour boat with a 4-engine repower in progress. The site visits were successful in giving EPA and the MPCA staff a behind the scenes look at installation efforts and challenges. Both grant examples met expectations in fulfilling their grant work.
- The MPCA has begun to quantify diesel emission reductions by various key pollutants. The MPCA staff will use the EPA Diesel Emissions Quantifier to estimate emission reductions for PM 2.5, NOx and CO2. A data background /assumptions document will be developed to explain averages used for input data; such as miles per gallon, miles traveled and idling time for certain equipment/vehicle groupings.
- A more accurate estimate of completed school bus retrofits is 1,800 completed by the end of December 2010. We are forecasting that another 600 buses will be retrofit by the end of June in 2011.
- Despite a severe nationwide shortage of diesel oxidation catalysts in the summer of 2010, the MPCA completed approximately 100 additional municipal heavy-duty truck retrofits in the Twin Cities metro area via the CMAQ Grant. This brings the total to about 340 vehicles through September

2010. Meetings held this past year with city fleet managers at Minneapolis and St. Paul have helped lay plans to retrofit 40 additional fire trucks.

- In the past year, three off-road repowers were completed with the ARRA Grant, along with four-engine tour boat repower already mentioned; a large crane and a grader have also been repowered.
- By the end of September 2010, \$1,095,720 of the \$1.55 million (for projects) was disbursed by the MPCA for ARRA clean diesel work in Minnesota. Almost 70 grants were executed. These projects represent approximately 270 vehicle units that will benefit from reduced emissions.
- The MPCA has begun to work on a comprehensive RFP for the DERA Grant that would include funding opportunities for airports, Twin Cities-area railroad yards and school bus retrofits.

### EPA comments:

- The MPCA reports that they are meeting the commitments outlined in the EnPPA. The MPCA indicates that they are continuing their involvement in almost every aspect of the joint priorities. There was no 2010 update to a few listed items but as the Minnesota state lead, I know that, 1) MPCA continues to provide SmartWay information for every APU loan they give out, and 2) MPCA does indeed coordinate with MEI/Project Green Fleet. If MPCA has not yet done so, they should work with MEI/Project Green Fleet to ensure that their joint diesel emission reduction plan is up to date.

### MPCA Response:

- 1) The MPCA's Small Business ombudsman (Mike Nelson) provides SmartWay information to those fleet owners who are either pursuing a loan or inquiring about various funding options for different devices and technologies.
  - 2) The MPCA has established monthly update meetings with its Clean Diesel grant coordinator, Small Business ombudsman and the Project Green Fleet Director. We are currently working (collaboratively) on updating the existing statewide diesel emission reduction plan that was last revised in 2009.
- The MPCA indicates that part orders and a faltering economy have slowed ARRA grant actions. The EPA has extended the MPCA's ARRA grant and as of the date of this review, EPA anticipates that the MPCA will successfully complete their project within the updated time frame.

### MPCA Response:

All projects and all funding for the MPCA's Clean Diesel Recovery Act grant were successfully completed by March 31, 2011.

### Joint Priority Responsibilities:

1. Advocate participation and actively solicit membership in EPA's SmartWay Transport program by Minnesota trucking companies.

#### FFY2009 Report:

During the FFY2009, the MPCA promoted the SmartWay Transportation program through the MPCA Small Business Auxiliary Power Unit (APU) Loan Program. The SmartWay program was referenced in materials provided to small trucking companies interested in purchasing an APU to reduce their diesel emissions through this idling alternative.

2. Partnership and participation in EPA's Midwest Clean Diesel Initiative. MPCA will provide staff and leadership support for this effort and participate in and/or coordinate with Midwest Clean Diesel activities. EPA Region 5 will coordinate the Midwest Clean Diesel Initiative and offer technical and financial resources, where available, in support of Minnesota's diesel emission reduction plan.

**FFY2010 Report:**

The MPCA's ARRA grants specialist presented and participated in two Midwest Clean Diesel Initiative conferences in the past year.

3. Participation and financial support for Project Green Fleet continues. Project Green Fleet is an innovative voluntary approach to accomplishing retrofits and commitment to diesel idling reduction through a private-public partnership. The MPCA is currently committed to develop in partnership with Clean Air Minnesota, a statewide diesel emission reduction plan based on this model. Project Green Fleet is a significant component of that plan.
4. Offer opportunity for Supplemental Environmental Projects. The MPCA will offer diesel retrofits, installation of Auxiliary Power Units and other diesel reduction activities as a SEP, at every applicable enforcement opportunity.
5. Participation in CenSARA's Blue Skyways Collaborative. The MPCA will seek other federal funding for reduction in idling and retrofits. The EPA Region 5 will support the MPCA's efforts with EPA Region 6 and 7.
6. Offer financial support. EPA Region 5 will seek to allow attainment states to participate in funding opportunities for diesel reduction projects.

**Additional information:**

For more information on the Midwest Clean Diesel Initiative Joint Priority contact:

At MPCA: Rick Patraw, 651-215-0193, or [rick.patraw@state.mn.us](mailto:rick.patraw@state.mn.us)

At EPA Region 5: Steve Marquardt, 312-353-3214, or [Marquardt.Steve@epa.gov](mailto:Marquardt.Steve@epa.gov)

## ***Home Land Security***

October 1, 2008 – September 30, 2012

### ***Part 1: Preparedness for managing and decontaminating debris, structures, and places contaminated by biological, chemical, or radiological materials.***

#### **Objective:**

To be prepared for management and decontamination of contaminated debris. The EPA and the MPCA will cooperate in preparedness training and exercising for management of debris and decontamination of structures and places contaminated by biological, chemical, or radiological materials or agents.

#### **Statement of Environmental Problem/Issue:**

Debris and contaminated debris remains after the rescue and public safety phase of a terror event or a nuclear power plant off-site release.

#### **Actions to be accomplished or Progress Update:**

1. During the period of this PPA, the MPCA and the EPA agree to attempt to present at least two major decontamination training and exercise events in Minnesota. The suggested scenarios for the training and exercise events are, 1) decontamination of a public building by a biological agent for one event, and 2) management of off-site materials and properties (such as fields, milk, hay and houses) contaminated by a nuclear power plant release suggested for the second event.
2. For each of the training and exercise events EPA Regional and National Decontamination Team experts as available will present a day-long workshop on the selected decontamination and debris management topic. The MPCA will invite appropriate staff from the the MPCA, other state agencies, city and county agencies, facilities, and contractors to the training. The MPCA will handle the logistics of the training session.
3. Approximately three months after the training session, EPA and MPCA will co-lead a tabletop exercise. The exercise will be designed to practice or test the roles, capabilities, command, and technical aspects of scenarios for the selected bio/chem/rad agents. The MPCA will handle the logistics of the training session. EPA will bring appropriate EPA experts as available, and will request participation by appropriate experts of other national response organizations that would play important roles in an incident (e.g. NRC, ATSDR, military). The MPCA will bring appropriate state experts, and will request appropriate local, facility, and contractor experts.
4. Following the training and tabletop the EPA and the MPCA will endeavor to improve identified gaps or capability weaknesses.

#### **FFY2009 Report:**

1. On April 30, 2009, EPA regional and headquarters staff, NRC staff, American Nuclear Insurers, FEMA, HSEM staff presented training on the assessment and recovery phase of an off-site release from a nuclear power plant to audience of state, local, and federal responders and planners. On May 1, 2009, presenters and audience participated in a facilitated discussion/exercise of the issues related to assessment, cleanup, and re-entry into evacuated areas on the management of contaminated lands and materials.

EPA committed to arranging further training and exercising on this topic.

### **FFY2010 Report:**

The MPCA, Minnesota Department of Health (MDH), and Minnesota Department of Public Safety Homeland Security and Emergency Management (HSEM) met with EPA Region 5 and the other regional states twice in FFY2010 and once so far in FFY2011 in "Readiness to Respond" assessments. The purposes of the Readiness to Respond assessments and projects align perfectly with the purposes of this Home Land Security project under the EnPPA, therefore, the MPCA has consolidated the two projects.

In the first three meetings of Readiness to Respond, each state assessed state and local capabilities and likely needs in chemical, biological, and radiological scenarios. EPA presented federal capabilities. States and EPA discussed likely command and support roles.

At the third Readiness to Respond meeting the MPCA and EPA agreed to proceed with two training and exercise cycles. One will be related to a bio scenario and a second related to a rad dispersion device scenario. The training and exercises will be done in calendar 2011 and calendar 2012. The MPCA and EPA OSC Vega are currently drafting the first ideas for the training/exercise, with participation of HSEM and MDH. Tentative training and exercise date is October 2011 with a rad dispersion scenario.

The radiation scenario initially proposed in this Home Land Security project was recovery and debris issues following the ingestion phase of a nuclear power plant incident. The roles of power plant operator, their insurer, federal and state responders; and the jurisdiction of various federal acts; and the fundamental responsibility for recovery phase cleanup remains unclear. So training and exercising the power plant recovery phase will not yet be useful pending a clear understanding of roles and responsibilities.

The radiation scenario of a radiation dispersion device in a public place replaces the power plant scenario in the EnPPA Home Land Security commitment. This scenario is under active planning and exercise by Minnesota local and state responders for the discovery, evacuation, medical, and isolation phases. So a fall 2011 training and exercise project may be perfectly timed for Minnesota's purposes.

### **Joint Priority Responsibilities:**

1. Stephen Lee, MPCA
2. Len Zintak, EPA
3. Jason El-Zien, EPA

### **Additional information:**

At MPCA: Stephen Lee, Manager, Emergency Response and Preparedness at 651-757-2160, or [stephen.lee@state.mn.us](mailto:stephen.lee@state.mn.us)

At EPA: Len Zintak, 312-886-4246, or [zintak.leonard@epa.gov](mailto:zintak.leonard@epa.gov); or  
Jason El-Zien, 312-886-6039, or [el-zein.jason@epa.gov](mailto:el-zein.jason@epa.gov)

## ***Part 2: Natural Disaster Debris***

### **Objective:**

To prepare for debris from natural disasters, including supporting local government's management of debris; managing orphan oil and chemicals; and overseeing responsible party cleanups of oil and chemicals spilled in a natural disaster.

**Statement of Environmental Problem/Issue:**

Natural disasters such as floods and tornadoes can spill and spread oil, chemicals, and demolition debris.

**Actions to be accomplished or Progress Update:**

1. The MPCA will maintain existing MPCA's Emergency Operating Plan and its guidance for natural disaster related debris, including management of oil and chemical debris, household hazardous wastes, etc. EPA concur.
2. EPA will review and comment on the MPCA's natural disaster related debris guidance, and will provide advice and examples of other states' and federal debris guidance. EPA concur.

EPA is developing a website which will provide advice and examples of debris guidance. EPA will provide comments on the MPCA developed guidance.

**FFY2009 Report:**

The MPCA significantly updated debris management guidance materials following the threatened flooding of the Red River of the North. Updated guidance is being compiled into a Standard Operating Guidance (SOG) which will be forwarded to EPA on completion, anticipated winter 2009. EPA concur.

**FFY2010 Report:**

The MPCA SOG for natural disaster debris remains in preparation. Flooding in fall 2010 and anticipated spring flooding in 2011 puts emphasis on this SOG.

**EPA comments:**

EPA looks forward to the completion of the SOG and will review and provide comments once it is received. Please note that the EPA staff contact on this commitment has changed from Paul Ruesch to Rebecca Geyer, EPA Land and Chemical Division. Regarding the disaster debris website, during FY2010, US EPA collected and compiled various resources including examples of state guidance documents and information from other federal agencies. The website will be available in FY2011.

**Joint Priority Responsibilities:**

1. Stephen Lee, MPCA
2. Rebecca Geyer, EPA Land and Chemicals Division

**Additional information:**

At MPCA: Stephen Lee, Manager, Emergency Response and Preparedness at 651-757-2160, or [stephen.lee@state.mn.us](mailto:stephen.lee@state.mn.us)

At EPA: Rebecca Geyer, Land and Chemicals Division at 312-353-8314, or [geyer.rebecca@epa.gov](mailto:geyer.rebecca@epa.gov)

***Part 3: Water/Wastewater Agency Response Network (WARN)***

**Objective:**

Support local water and wastewater utility mutual aid and other emergency preparedness.

**Statement of Environmental Problem/Issue:**

The Water/Wastewater Agency Response Network (WARN) is a developing partnership between many of the State's water and wastewater utility officials. The WARN system seeks to provide for mutual aid

between the utilities when one has suffered man-made or natural disaster WARN will also facilitate mutual training for the utilities.

**Actions to be accomplished or Progress Update:**

The Minnesota Water/Wastewater Agency Response Network (MNWARN) is a system of members of the water/wastewater regulated community that have come together to address, mutual aid during man-made and natural disasters. The MPCA and EPA agree to:

a) As requested, support and assist the Minnesota drinking water and wastewater utilities WARN program in order for them to prepare for mutual assistance during natural and man-made disasters.

**FFY2009 Report:**

No specific requests for support from MnWARN

**FFY2010 Report:**

Flooding in September 2010 put the MnWARN system to a test. The MPCA closely coordinated with the MnWARN operator mutual aid system for procuring pumps, expertise, and operational assistance for operators. The MPCA wastewater staff was in contact with wastewater operators and have done field visits to inspect and advise operators on bypass procedures and on returning their wastewater plants to normal operation. All parties had very positive experience with the mutual aid and assistance provided under the MnWARN system.

**Joint Priority Responsibilities:**

1. Steve Lee and Wendy Turri, MPCA
2. Nick Damato, EPA

**Additional information:**

At MPCA: Stephen Lee, Manager, Emergency Response and Preparedness at 651-757-2160, or [stephen.lee@state.mn.us](mailto:stephen.lee@state.mn.us)

At EPA: Nick Damato at 312-886-0190, or [damato.nicholas@epa.gov](mailto:damato.nicholas@epa.gov)

At MDH: Jon Groethe at 330-223-7339; or  
Bob Smude at 651-201-4677