

FFY2016 Self-Assessment EPA Region 5 and MPCA Joint Priorities

Air Quality Permitting

October 1, 2013 – September 30, 2016 (FFY 2013-2016)

FFY 2016 REPORT

Objective:

Reduce the MPCA's renewal backlog

Statement of Environmental Problem/Issue:

The Minnesota Pollution Control Agency (MPCA) implements the requirements of Title V of the Clean Air Act through its combined construction and operating permits program, which was approved by EPA on December 4, 2001 (66 Fed Reg 62967). Through regular program interactions, our annual planning process, and periodic program reviews, U. S. Environmental Protection Agency (EPA) and MPCA discuss program progress and implementation issues. MPCA and EPA agree that there is a large backlog of Title V renewal applications. EPA and MPCA seek to work jointly to significantly increase issuance of Title V operating permit renewals, thereby reducing MPCA's renewal backlog.

Actions to be accomplished or Progress Update:

1. MPCA will maintain a minimum number of FTEs to processing Title V permit actions. A Title V action is a reissuance, a first time Title V permit for a new facility or a facility moving from a state permit to a Title V permit. The MPCA will also look for ways to increase the minimum number of staff working on Title V actions.
2. EPA and MPCA will work to identify areas to assist the permit program, as a whole, to improve efficiency. EPA and MPCA will select three-four permit processing impediments per year (continuing throughout the term of the EnPPA) to investigate possible solutions. The impediments to work on will be identified no later than April 1 of each year. In order to maximize MPCA staff time to write permits EPA Region 5 staff will take the lead in researching the impediments and proposing possible solutions. As necessary, EPA will elevate issues internally for resolution.
3. By December 31, 2013 the MPCA will issue 20 Title V actions.
4. By December 31, 2014 the MPCA will issue an additional 25 Title V actions.
5. By December 31, 2015 the MPCA will issue an additional 25 Title V actions.
6. By December 31, 2016 the MPCA will issue an additional 30 Title V actions.
7. By December 31, 2017 the MPCA will issue an additional 30 Title V actions.
8. Thereafter, MPCA will continue to issue Title V actions with the goal of continuing to reduce the backlog of pending Title V applications.

FFY 2013 Report:

1. MPCA currently has six (6) Full Time Equivalent (FTE) working exclusively on Title V permit actions. A seventh FTE will be added in November 2013. Because of Minnesota's combined operating and construction permit program, Title V permit actions are also occasionally processed by staff not assigned exclusively to Title V permit (e.g., a Title V reissuance will

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sometimes be done in conjunction with a construction project, provided the additional time to process the reissuance will not pose a problem for the source's construction schedule). In addition, since October 1, 2012, nine FTEs have been hired to write construction permits; as part of their new-staff training, each of these FTEs processes two-three Title V permit actions.

2. Two projects have been identified with EPA Region V staff (once-in-always-in issues for small coating operations, which are potentially subject to MACT standards and pollution control projects). We plan to further discuss these with EPA staff during our Program Evaluation meetings on November 5-6, 2013.
3. From October 1, 2012, through September 30, 2013, 38 Title V permit actions were issued (31 reissued, and 7 first-time part 70 permits). Four more are anticipated to be issued by December 31, 2013, for a total of 42.

FFY 2014 Report:

1. MPCA currently has eight (8) FTEs assigned to work on Title V permit actions. Two (2) more staff are also assigned to spend a portion of their time in Title V permit actions. Because of Minnesota's combined operating and construction permit program, Title V permit actions are also occasionally processed by staff not assigned exclusively to Title V permit (e.g., a Title V reissuance will sometimes be done in conjunction with a construction project, provided the additional time to process the reissuance will not pose a problem for the source's construction schedule). In addition, since October 1, 2013, three (3) FTEs have been hired to write construction permits; as part of their new-staff training, each of these FTEs processes two-three Title V permit actions.
2. The MPCA is in the process of developing a new general permit for low-emitting Part 70 sources. This will cover those sources who have not previously applied for permits and who fall into the "once-in-always-in" category of being subject to a major source National Environmental Performance Partnership System (NESHAP) yet having very low actual emissions.
3. NA
4. So far, in calendar year 2014, 20 Title V permit actions have been issued, with an additional four permits on public notice and expected to be issued by the end of the year. Also, the MPCA is currently accepting applications for the newly revised Title V Manufacturing General Permit. It is anticipated that up to 17 facilities may receive that permit by the end of the year, which would bring the total for 2014 to 41 Title V permit actions.

EPA Response:

Although MPCA has met its issuance goals set in the joint priority, EPA is still concerned with the magnitude of Minnesota's Title V permit backlog. While MPCA and EPA have, explored methods to address impediments to Title V permit issuance, these efforts have not been sufficient to reduce the backlog. Issuance of a Title V permit within 18 months of complete application is a requirement of the Clean Air Act and elimination of all Title V permit backlogs within two years is a current regional priority. The current targets in the joint priority will not be sufficient to meet these goals. At this time, MPCA's backlog is approximately 145 permits. In order to eliminate the backlog in two years, MPCA will need to issue about 75 Title V permits each year for the next two years. EPA would like to revisit the targets in Title V backlog joint priority with the goal of eliminating the backlog by December 2016 in mind.

MPCA Response:

The PPA agreement between the MPCA and EPA Region 5 established in 2013 details the plan through 12/31/17 for the minimum number of Title V reissuances the MPCA will issue each year. The MPCA completed 38 actions in 2013 and 35 actions in 2014. Both these exceed the numbers in the

Performance Partnership Agreement (PPA) by approximately 50%. Current projections for 2015 show us doing better than the previous two years. Based on this it shows that the MPCA is working hard to honor the plan that the MPCA and EPA Region 5 agreed to in 2013. The MPCA continues to implement new improvements in attempts to keep increasing our numbers and reducing our overall backlog. We have laid out a new continuous improvement plan with Region 5 for a detailed review of our process by Region 5 AQ permit staff to help us look for any additional process changes or inefficiencies in our system. We hope to begin to work with Region 5 in the spring of 2015 on this new effort. At this point in time our resource and funding allocations are set based on the agreed to numbers in the PPA. We are hopeful we will continue to exceed the PPA numbers but will not be able to reduce our backlog to zero by the end of 2016.

EPA Comments (April 2015):

Thank you for sharing the efforts MPCA has undertaken to date to begin to reduce its backlog. However, we remain concerned that it is not sufficient. The Clean Air Act requires issuance of Title V permits within 18 months of a complete application. MPCA's current Title V backlog demonstrates that MPCA is not meeting this deadline. EPA reiterates the need to eliminate MPCA's backlog by December 2016.

MPCA Comments (April 2015):

The MPCA understands the importance that EPA is now placing on the zero backlog effort. However, when this joint priority in the PPA was originally agreed to by all parties there was no such goal. The MPCA set its staffing, budget requests and issuance goals around that agreement. Therefore, at this point in time it is not possible for the MPCA to get all the pieces in place to achieve a zero backlog by the end of 2016. As indicated before we continue to exceed the goals set in the PPA and we are definitely moving our program in the right direction. We look forward to discussing this more in our upcoming annual Air Quality joint meeting with EPA.

FFY 2015 Report:

1. MPCA currently has eight (8) FTEs assigned to work on Title V permit actions; one (1) additional FTE currently on leave of absence will be returning in CY2016 and will be assigned to Title V permits, and two (2) more staff are assigned to spend a portion of their time on Title V permit actions. Because of Minnesota's combined operating and construction permit program, Title V permit actions are also occasionally processed by staff not assigned exclusively to Title V permit (e.g., a Title V reissuance will sometimes be done in conjunction with a construction project). In addition, since January 1, 2015, five (5) FTEs have been hired to write construction permits; as part of their new-staff training, each of these FTEs processes two-three Title V permit actions.
2. The MPCA completed development of a new general permit for low-emitting Part 70 sources. This covers those sources who have not previously applied for permits and who fall into the "once-in-always-in" category of being subject to a major source NESHAP yet having very low actual emissions. This streamlines permitting for these types of sources.
3. NA
4. NA
5. So far, in calendar year 2015, 38 Title V permit actions have been issued, with an additional four permits on public notice and expected to be issued by December 31, 2015, which would bring the total for CY2015 to 42 Title V permit actions. In FFY 2015, 52 Title V permits were issued.

EPA Response (January 2016):

1. We appreciate MPCA's efforts to meet and exceed its Title V permit issuance goals for calendar year 2015 as set in the joint priority and working to maintain FTE devoted to this endeavor.

Unfortunately, these two efforts have not been sufficient to make any significant reduction in the backlog of Title V permits. Minnesota now has the largest backlog in the Region and one of the largest in the country. Furthermore, we understand that MPCA recently began using the Tempo database to process permits and the transition to this new platform has led to significant delays in permit issuance. EPA encourages MPCA to assign the necessary resources to address any delays caused by the new Tempo system to ensure Title V permit issuance goals are exceeded and its backlog is significantly reduced in 2016.

2. As MPCA implements streamlining procedures, EPA will continue to assist in any manner necessary, including ongoing dialogue of new streamlining ideas.
3. NA
4. NA
5. The 2016 issuance goal is for MPCA to issue 30 Title V permits. EPA reiterates the importance of exceeding this goal, preferably by a large margin and significantly reducing its backlog. However, EPA also requires that MPCA maintain its standard for quality Title V permits.

MPCA Response (March 2016):

- 1-5 As discussed with EPA in our monthly phone conversations, we expect to issue 30 Title V permit this year but not many more and no significant backlog reduction will occur. Air Quality Permit resources have been cut because of overall MPCA budget concerns. The new Tempo system and budget cuts have put us in a significant hole on our construction program and resources have been moved from Title V to help get us back to a point we were in the spring of 2015 on construction. We do not see problems starting to be mitigated until at least spring of 2017 for construction and then at that point resources may be able to be returned to Title V Program.

EPA Response (April 2016):

EPA has several yet to be resolved concerns with MPCA's approach to resolving its Title V backlog. See April 2015 and January 2016 comments from EPA to MPCA. Part 70 requires that the permitting authority use the Title V fees it collects to implement their Title V operating permit program. It is inappropriate to move resources from the implementation of the Title V program in order to focus on construction permitting as you stated in your March 2016 communication. In addition, Minnesota currently has a 41% backlog of Title V permits and ranks fifth worst in backlog nationally. Issuance of 30 permits in 2016 does not adequately address the current backlog. EPA will continue to work with MPCA on streamlining efforts to reduce the time it takes MPCA to issue permits. However, MPCA needs to prioritize its Title V permit backlog and should ensure that Title V funds are supporting its Title V operating permits program.

MPCA Response (April 2016):

While the MPCA does continue to focus our limited permitting resources on priority construction project to ensure a strong local and national economy, we do have a plan to reduce our Title 5 backlog. As we have discussed with EPA, once we have completed the build out of our new permitting database in 2016, we will be able to redirect the necessary resources back to the Title 5 reissuance program. We understand the importance of having current permits and are committed to reducing the Title 5 backlog as soon as possible. We appreciate EPA's patience and willingness to assist.

FFY 2016 Report:

1. MPCA currently has eight (8) FTEs assigned to work on Title V permit actions and two (2) more staff are assigned to spend a portion of their time on Title V permit actions. Because of Minnesota's combined operating and construction permit program, Title V permit actions are also occasionally

processed by staff not assigned exclusively to Title V permit (e.g., a Title V reissuance will sometimes be done in conjunction with a construction project). In addition, since October 1, 2015, three (3) FTEs have been hired to write construction permits, and we have one (1) vacancy for a FTE to be assigned to construction permits; as part of their new-staff training, each of these FTEs processes 2-3 Title V permit actions.

2. No specific projects were worked on with EPA during the FFY 2016. As a result of the new general permit for low-emitting Part 70 sources developed in FFY 2015, seven (7) Part 70 permits were issued to source that otherwise would have been issued individual Part 70 permits at significantly more time and cost.
3. NA
4. NA
5. NA
6. So far, in calendar year 2016, 23 Title V permit actions have been issued, with an additional four permits on or finished with public notice and expected to be issued by 12/31/16, which would bring the total for CY2015 to 27 Title V permit actions. In FFY 2016, 26 Title V permits were issued.

EPA Response (January 2017):

1. EPA encourages MPCA to ensure that adequate staff are dedicated to Title V permit issuance at all times. EPA and MPCA agreed in the Joint Permitting Priority for FY 2017-2019 to make reduction of the Title V backlog a priority. It is important that MPCA hire and maintain FTEs assigned to work on Title V permit actions and backlog to address this important priority.
2. EPA supports MPCA's streamlining efforts, such as the new general permit for low-emitting Part 70 sources, which have reduced the burden and resources spent on smaller sources that otherwise would have been subject to Title V. EPA reiterates its commitment to assisting MPCA as it identifies and implements new streamlining endeavors.
3. NA
4. NA
5. NA
6. Under the Joint Permitting Priority for FY 2017-2019, different milestones were set to specifically address backlog reduction. MPCA's goal was to reduce Title V backlog to 124 permits by December 31, 2016. MPCA reduced its backlog to 122 permits and exceeded the first milestone. EPA looks forward to working with MPCA to continue its Title V backlog reduction.

MPCA Response:

We meet the first backlog reduction goal and appear so far this year to be on track to meet the next reduction goal by December 31, 2017.

Additional information:

For more information on Air Quality Permitting contact:

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Environmental Justice and Urban Air Quality

October 1, 2012 – September 30, 2016 (FFY 2013-2016)

FFY 2016 REPORT

Minnesota Context:

The Minnesota Pollution Control Agency's (MPCA) analysis of air quality information, including air monitoring data, air emissions data, air modeling data and risk modeling data, show two significant findings. The first finding is that a significant portion of Minnesota's air pollution comes from on-road mobile sources, off-road mobile sources and small stationary sources. The second finding is that locations in Minnesota with higher population densities, including Rochester and the core cities of Minneapolis and St. Paul, have higher levels of air pollution and experience higher resulting health risks from air pollution.

Within the densely populated urban areas of Minneapolis and St. Paul are communities of color, including Native American communities, and communities with lower economic status. Minnesota Department of Health data shows these communities have higher rates of adverse health outcomes with potential air pollution exposure components, such as asthma prevalence, asthma hospitalizations and cardiovascular hospitalizations. The Minnesota Department of Health (MDH) reports cancer rates at the county level and has not analyzed cancer rates for the core cities of Minneapolis, St. Paul or Rochester.

The MPCA has recently experienced significant community opposition during permitting decisions and environmental review decisions. In many of these cases, the emissions from the point source seeking the permit were small and well controlled. In addition, the MPCA's review found that the emissions would not likely create additional health risks, either individually or on a cumulative basis, and that mobile sources and small stationary sources were the major sources of air pollution in the area. The community comments for these projects centered on community characteristics such as asthma rates, cancer rates and environment justice concerns. A common characteristic of all of these projects is the lack of trust between the community and the MPCA regarding the major sources of air pollution, the potential health risks from point sources and the connection between point source air pollution and health disparities.

To begin addressing the fair treatment pillar of environmental justice, the MPCA applied for a competitive grant under the Community Scale Air Toxics Grant process. The grant sought funding to develop new monitoring techniques for air toxics of concern in South Minneapolis, an area with environmental justice concerns, and engage the community in the deployment of the monitors and evaluating the results of the monitoring. This grant is not part of Minnesota's PPG. However, the MPCA recognizes this important environmental justice work in the context of the state and federal relationship and seeks to acknowledge the environmental commitments embodied in the PPA with the specific commitments contained in the Community Scale Air Toxics Grant.

Additionally, in a fall 2012 environmental review for a permit application, the MPCA identified a potential modeled exceedance of the 2006 24-hour PM_{2.5} National Ambient Air Quality Standard (NAAQS) in North Minneapolis. The potential modeled violation was not caused by the permit under review and the MPCA committed to deploy a new PM_{2.5} monitor near the potential modeled exceedance, work with nearby permitted sources to improve PM_{2.5} controls in the area and maintain engagement with the community to keep them informed of new data and information. The initial discussions with the community indicates that the commitment in North Minneapolis will include broader discussions of the nature of air pollution in the area, significant sources of air pollution for the area and potential reduction options available.

This joint priority supports EPA's Environmental Justice Plan 2014, specifically under Supporting Community-Based Action Programs section 1 (advance environmental justice principles by building strong state partnerships with the National Environmental Performance Partnership System (NEPPS)) and section 3.4 (build on and leverage Agency efforts to promote greater coordination in the use of programs and tools that support community empowerment). The joint priority also supports Section 4 Tools Development Areas, Strategy 5 which is intended to build and strengthen technical capacity of community-based organizations and community EJ and health leaders to address environmental health disparities and environmental sustainability issues by building community capacity to address asthma disparities and increase citizen participation in science and decisions.

Recognizing that environmental justice and urban air quality are important to both agencies, these activities will offer the opportunity to address these issues as they arise. Acknowledging that a variety of statewide issues may warrant support during the state's air quality planning, permitting and enforcement efforts, EPA is prepared to support the state when they occur. For example, air toxics and asthma community concerns may need to be explained to the community, and support and assistance given to MPCA. EPA will participate in planning meetings and outreach efforts as well as attend meetings to explain risk and public health concepts as well as share the results of studies.

On an annual basis, MPCA and EPA Region 5 program leadership will jointly identify the specific programs to involve in the community engagement efforts in South and North Minneapolis to provide a coordinated and effective deployment of each agency's air quality experts. Depending on the needs of the community and the grant progression, these experts may be air-monitoring staff, air toxics staff, risk assessment staff, or risk communication staff.

Joint Priority Elements:

The MPCA and EPA Region 5 seek to work jointly in the following areas over the duration of this PPA and the Community Scale Air Toxics Grant.

- 1) The MPCA will meet all grant commitments as described in the Community Scale Air Toxics grant for the development of air monitoring techniques, the deployment of additional monitors and community engagement.
- 2) The MPCA will engage communities in areas where there are environmental justice concerns in South Minneapolis and Northern Minneapolis, to address concerns about air pollution, health risks, and air pollution sources and seek to build better trust and communication between community members and the MPCA.
- 3) The MPCA will engage other communities in areas where there are environmental justice concerns related to air pollution in other parts of Minnesota as resources allow.
- 4) EPA Region 5 Air Monitoring Program, Air Toxics Program, and Environmental Justice Program will participate in the community engagement efforts of the MPCA in North and South Minneapolis to build and strengthen technical capacity of community-based organizations and community environmental justice and health leaders to address environmental health disparities and environmental sustainability issues." (Plan EJ 2014, Science Tool Development Implementation Strategy 5).
- 5) On an annual basis, MPCA and EPA Region 5 program leadership will jointly identify the specific programs to involve in the community engagement efforts in South and North Minneapolis, or other locations in Minnesota, to provide a coordinated and effective deployment of each agency's air quality experts. Depending on the needs of the community and the grant progression, these experts may be air-monitoring staff, air toxics staff, risk assessment staff, or risk communication staff.

- 6) In addition to building and strengthening technical capacity of communities, the MPCA and EPA Region 5 agree to work collaboratively to build trust between the communities of North and South Minneapolis, or other locations in Minnesota, and the environmental agencies to improve the understanding of air pollution sources and risks as well as identify common ground for emission reduction opportunities.
- 7) EPA Region 5 Asthma Program will coordinate with relevant stakeholders (including the MDH, American Lung Association of the Upper Midwest, and the Minnesota Asthma Coalition) to provide community outreach, education, and resources about comprehensive asthma management and improve their understanding of asthma associated with indoor and outdoor air quality and other common triggers.

FFY 2013 Report:

During FFY 2013, the MPCA significantly enhanced its efforts to address environmental justice issues, especially related to air quality in the urban area of the Twin Cities.

To improve efforts to strive for environmental justice issues in general, the MPCA renewed its EJ policy, formed a Commissioner-led EJ Steering Team, included an EJ goal in our 2013-2017 Strategic Plan, committed to integrate EJ into our daily work and dedicated a full-time senior staff person to coordinate EJ issues. In January 2013, agency managers were trained by EPA Region 5 on EJ principles and practices.

At the request of EJ advocates, the MPCA initiated quarterly dialogues between the EJ Steering Team and the EJ community. The first meeting was held in North Minneapolis on June 14, the second in South Minneapolis on October 1. In addition, the MPCA's EJ coordinator held numerous meetings with individuals and small groups and attended event in EJ communities in order to understand concerns learn about capacity-building needs and build relationships.

As a first step to improving EJ integration into the MPCA's day-to-day work, four program areas at the MPCA were identified to pilot EJ integration. One of the four pilot areas selected included improving urban air quality. The MPCA created a leadership steering team to oversee implementation this joint priority with EPA and to ensure coordination of the pilot project.

During 2013, specific work on urban air quality and environmental justice included:

Monitoring

"Roving Monitor" With funding from the Minnesota Legislature, the MPCA initiated short-term localized monitoring of air toxics, PM 2.5 and metals in the Little Earth residential area of South Minneapolis, a Native American housing community. As directed by the legislature, this monitor will be relocated to a different area of potential EJ concern every three months, allowing for gathering data from up to eight sites over a two-year period. The results will be compared to ongoing monitoring site data and shared with community members shortly after the monitoring period.

North Minneapolis PM 2.5 Monitoring The MPCA installed a PM 2.5 monitor in an industrial area of North Minneapolis with EJ concerns. This monitor will operate for up to two years. Preliminary findings after six months of monitoring were analyzed and shared with the community; more robust outreach is planned following the first full year of monitoring in early 2014.

PAH Monitoring With EPA Community-Scale Air Toxics grant funding, the MPCA, MDH and the Mille Lacs Band of Ojibwe Department of Natural Resources began a two-year study to monitor polycyclic aromatic hydrocarbons (PAHs) at about 16 sites in an area of South Minneapolis of potential concern for environmental justice. The siting of the monitors included community engagement efforts. No results were available in 2013.

Air Permitting in South Minneapolis. A 2008 state law requires the MPCA to analyze and consider cumulative levels and effects of past and current pollution before a permit may be located in a specific area of South Minneapolis. This was enacted due to concerns about environmental justice. With stakeholder input, the MPCA developed a process for conducting this analysis as well as protocol for enhanced public outreach. In FFY 2013, the MPCA concluded work on an air permit for boilers and emergency generators at a hospital in the area.

MPCA and Minnesota Department of Health Joint Initiative of Respiratory Disease. MPCA and MDH sought funding and received funding from the State legislature for a joint initiative related to reduce the burden of air pollution on chronic respiratory disease in densely populated areas. This two-year project will identify strategies for each agency and other partners to implement to reduce air-pollution related disease. The work will also include development of tools and resources for local government and others to support their work.

Ramsey County Community Health Improvement Planning. PCA staff participated in a nine-month process to develop a five-year plan strategy to improve health in Minnesota's second most populated county, which includes St. Paul. While this effort addressed a wide variety of health factors, MPCA staff contributed, expertise and ideas related to reducing air pollution to improve health.

Much of the work above was initiated in FFY 2013 or in the previous two-three years. As the MPCA continues to develop its EJ work, the MPCA looks forward to continued collaboration with the EPA and community to build on these efforts.

EPA Comments:

In October 2013, Region 5 staff provided training to MPCA representatives on EJ policies and EJView. MPCA and Region 5 have initiated quarterly conference calls to discuss progress of the joint priority and identify any needs/tasks that Region 5 may provide assistance.

FFY 2014 Report:

During FFY2014, the MPCA continued its work to integrate environmental justice principles into all areas of the Agency's work and continued an emphasis on work related to urban air quality.

Integration of into Agency-wide Environmental Justice Principles Work

MPCA's Commissioner-led Environmental Justice Steering Team oversaw work towards developing an EJ Framework or plan. The framework is envisioned to cover all areas of the MPCA's work including assistance, regulatory programs, monitoring, outreach and stakeholder engagement. Four internal teams (see table below) have been working to develop each area. As described below, MPCA benefitted significantly from direct EPA assistance and also drew from EPA documents and guidance related to EJ integration. In addition, MPCA's steering team met with EJ community stakeholders on a quarterly basis to further inform the development of this plan. The MPCA's goal is for the framework to be rolled out in early 2015. MPCA welcomes the opportunity to discuss this work in greater detail with Region 5 staff and hopes that the resulting framework will be useful to other states in the Region.

Team/Area	Objectives/Deliverables	EPA Assistance
Core Regulatory Services (Permitting, Compliance and Enforcement, etc.)	Provide guidance to regulatory functions across the agency to identify and address disproportionate impacts and ensure meaningful citizen involvement. Deliverables: Written procedures and a set of tools for regulatory programs and functions.	Consulted with EPA Region 5 EJ staff and drew from elements of EPA's guidance materials including Plan EJ 2014 "Considering Environmental Justice in Permitting" and Activities to Promote Environmental Justice in the Permit Application Process".
EJ Area Analysis	Establish screening parameters and thresholds for identifying areas of potential concern for environmental justice. Deliverables: Procedures and tools delineating screening criteria and other tools/information for use in deepening understanding of community.	Headquarters and Region 5 staff provided assistance via webinars and MPCA-specific orientation/training in exploring capabilities of EPA's EJ View tool and features of the anticipated EJ Screen.
Enhanced Outreach	Identify steps to be taken during specific MPCA actions such as facility permitting, rulemaking, etc. to ensure meaningful involvement of EJ communities. Deliverables: Guidance to agency staff related to public meetings, public notices, community participation, etc. Includes procedures for evaluating language proficiencies and best practices.	MPCA staff drew from EPA documents such as Region 5's "Implementation Plan to Promote Meaningful Engagement of Overburdened Communities in Permitting Activities" and "Promising Practices for Permit Applicants Seeking EPA-Issued Permits."
Consideration of Cumulative Impacts	Establish a framework for identifying the need and applying specific processes to analyze the cumulative risk from multiple pollution sources to inform MPCA decisions and actions. Deliverables: Documented procedures and best practices for analyzing cumulative impacts	MPCA benefited significantly from ongoing participation in EPA-convened working groups and discussions around risk assessment and cumulative impacts analysis.

Urban Air Quality and Environmental Justice

During FFY 2014, specific work on urban air quality and environmental justice was concentrated in three areas related to monitoring, a joint initiative with MDH and an initiative to improve Minneapolis air quality:

Monitoring

Community Air Monitoring Program The MPCA continued its Community Air Monitoring Program (formerly referred to as "Roving Monitor") in areas of potential concern for environmental justice. This monitor was located for periods of three months in four sites, two in Minneapolis and two in St. Paul. The monitor measured air toxics, PM 2.5 and metals. The results from these monitoring sites are compared to ongoing monitoring site data and shared with community members shortly after the monitoring period.

North Minneapolis PM 2.5 Monitoring The MPCA continued monitoring for PM 2.5 in an industrial area of North Minneapolis with EJ concerns. In October of 2014, the MPCA began monitoring for Total Suspended Particulates and air toxics at this location.

PAH, Monitoring With EPA Community-Scale Air Toxics grant funding; the MPCA, MDH and the Mille Lacs Band of Ojibwe Department of Natural Resources completed the first of two years of monitoring of polycyclic aromatic hydrocarbons (PAHs) at about 16 sites in an area of South Minneapolis of potential concern for environmental justice. This study will conclude in 2015.

MPCA and Minnesota Department of Health Joint Initiative of Respiratory Disease. The MPCA and MDH continued work on a joint initiative related to air pollution and respiratory disease in the Minneapolis/St. Paul metro area. Major work in 2014 included initiating a Health Impact Assessment in a Minneapolis neighborhood, developing a website for communities, local governments and individuals related to air pollution and health and preparation of a major report on the health impacts of ozone and PM2.5 on residents in the Twin Cities region.

Improving Minneapolis Air – Pilot Project. In 2014, the MPCA initiated a pilot project to improve air quality in Minneapolis through collaboration with community stakeholders, local government and 12 of the largest permitted air emission sources in the city. While the long-term goal is to improve air quality, the shorter-term objectives are to improve our understanding of the facilities' emissions, identify opportunities to reduce releases and involve residents in discussions about improvements to the air and quality of life in the areas surrounding the facilities.

EPA response:

MPCA and EPA continue to make progress on the EJ/Urban Air Quality Joint Priority. The joint priority has been a useful vehicle for MPCA and EPA to collaborate in an effort to build partnerships and address concerns in underserved, minority communities in the Twin Cities. We have established quarterly conference calls to discuss progress and additional opportunities for collaboration to facilitate this project. Establishment of regular community meetings enhanced monitoring efforts, and development of an air quality and health impacts/outcomes tools and resources with the MDH are the key elements of the joint priority, which are being implemented successfully. The state has not only engaged the communities on issues but also companies to discuss emission reductions.

FFY 2015 Report:

During FFY2015, the MPCA continued work to integrate environmental justice principles into relevant areas of the MPCA's work, including an emphasis on work related to urban air quality.

Integration of Environmental Justice into MPCA Work

MPCA's Commissioner-led Environmental Justice Steering Team oversaw work towards completing an Environmental Justice Framework. The framework is our vision, strategies and initial implementation steps to integrate environmental justice principles into MPCA's work. The framework covers significant MPCA functions including assistance, regulatory programs, monitoring, rulemaking, and outreach and stakeholder engagement. Internal teams evaluated current approaches, identified opportunities and prepared strategies around these functions. EPA procedures, tools and documents were often used to help inform and guide our thinking. These included *EJSCREEN*, *Plan EJ 2014*, *Considering Environmental Justice in Permitting*, *Activities to Promote Environmental Justice in the Permit Application Process*, and *Guidance on Considering Environmental Justice during the Development of Regulatory Actions*, among others.

The MPCA also continued regular consultation with stakeholders and sought their input and feedback on specific strategies. The MPCA completed a draft in May and sought comments during a two-month comment period, with five open house-style public meetings in the Twin Cities and Duluth. Completion of the framework is anticipated in the first quarter of FFY16; however, implementation of key strategies, such as integration into permitting, is already being piloted.

Urban Air Quality and Environmental Justice

During FFY 2015, the MPCA continued concentrated work on urban air quality and environmental justice related to monitoring, a joint initiative with MDH and an initiative to improve Minneapolis air quality:

Monitoring

Community Air Monitoring Program: The MPCA continued its Community Air Monitoring Program in areas of potential concern for environmental justice. This monitor was located in four neighborhoods for periods of three months in Minneapolis, St. Paul and Duluth. The monitor measured air toxics, PM 2.5 and metals. The results from these monitoring sites are compared to ongoing monitoring site data and shared with community members. All but one site showed air quality very similar to that recorded at the MPCA's long-term monitoring sites. Results from a site in West St. Paul led to the MPCA to add a metals monitor for calendar year 2016 to collect more data on particle borne metals in an industrial area adjacent to an area of potential concern for environmental justice.

North Minneapolis TSP Monitoring: In October of 2014, the MPCA began monitoring for Total Suspended Particulates in an industrial area in North Minneapolis. The monitor-detected exceedances of the state standard regularly during FFY15 and the MPCA has been working with facilities in the area to identify and mitigate the sources of the exceedances. To aid in this effort, the MPCA added a second monitor.

PAH Monitoring: With EPA Community-Scale Air Toxics grant funding, the MPCA, Minnesota Department of Health and the Mille Lacs Band of Ojibwe Department of Natural Resources completed the second year of a two-year project to monitor polycyclic aromatic hydrocarbons (PAHs) at about 16 sites in an area of South Minneapolis of potential concern for environmental justice. The project partners are analyzing results and preparing conclusions, expected to be completed in FFY16.

MPCA and Minnesota Department of Health Joint Initiative of Respiratory Disease

The MPCA and MDH continued work on a joint initiative related to air pollution and respiratory health in the Minneapolis/St. Paul metro area. Major work in FFY15 included completion of a report on air pollution and health, completion of a web site and work on a Health Impact Assessment in a Minneapolis neighborhood.

"Life and Breath: How air pollution affects public health in the Twin Cities," analyzed air quality data from the MPCA and health data from MDH to estimate effects of PM2.5 and ozone on health outcomes for people living in the seven-county Twin Cities metro area. The MPCA and MDH published this report in July 2015. The report estimates that in 2008 about 6-13% of deaths and 2-5% of emergency room visits for heart and lung problems can be attributed to air pollution. The study also identified that people of color, low-income residents and other vulnerable groups were the most affected.

BeAirAwareMN.org is a new resource for citizens, communities, and businesses concerned about health and air quality. The site distills and simplifies information about all major air pollutants in Minnesota — both outdoor air and indoor air. The MPCA and MDH launched this site in July 2015 concurrently with the report above. The site includes:

- Tips to protect you and your family
- Current air condition and forecasts
- Relevant research about air pollution
- Actions for communities and employers

Health Impact Assessment in the Phillips Neighborhood: This project, involving several partners in the Phillips neighborhood of South Minneapolis, assessed the impacts of air pollution and identified recommendations to address health issues and other community concerns. The project partners, led by MDH expect to conclude this project in early FFY16.

Improving Minneapolis Air – Pilot Project

The MPCA continued work on a pilot project to improve air quality in Minneapolis through collaboration with community stakeholders, local government and 12 of the largest permitted air emission sources in the city. While the long-term goal is to improve air quality, the shorter-term objectives are to improve our understanding of the facilities' emissions. With a vacancy in the program coordinator position for much of FFY15, work focused mainly on identifying data needs to better quantify and model facility emissions.

EPA Comments:

We are pleased that the joint priority is progressing. We are appreciative of the quarterly meetings/calls that we continue to have with MPCA to discuss the joint priority. The joint priority is going into its 5th year. We are hopeful that by the conclusion of work under the joint priority some emission reductions would be achieved in the community, particularly given the existing programs and resources at the Minnesota Technical Assistance Program. We understand and are respectful of sensitivities in the community but would consider emission reductions in the area a great benefit to the community and residents.

FFY 2016 Report:

During FFY2016, the MPCA continued work to integrate environmental justice principles into relevant areas of the Agency's work, including an emphasis on work related to urban air quality.

Integration of Environmental Justice into MPCA Work

MPCA's Commissioner-led Environmental Justice Steering Team oversaw work towards completing an Environmental Justice Framework in December of 2015. The framework is our vision, strategies and initial implementation steps to integrate environmental justice principles into MPCA's work. The framework covers significant MPCA functions including assistance, regulatory programs, monitoring, rulemaking, and outreach and stakeholder engagement. In FFY 2016, the MPCA focused on integrating environmental justice into permitting and improved outreach. In addition, the MPCA formed a 16-member external advisory group to advise the MPCA Commissioner of effectiveness of implementation. The advisory group met for the first time in October 2016.

Urban Air Quality and Environmental Justice

During FFY 2016, the MPCA continued concentrated work on urban air quality and environmental justice related to monitoring, a joint initiative with Minnesota Department of Health (MDH) and an initiative to improve Minneapolis air quality:

Monitoring

Community Air Monitoring Program: The MPCA continued monitoring as part of our Community Air Monitoring Program in areas of potential concern for environmental justice. In FY2016, the monitors were located in three neighborhoods for periods of six months to one year in Duluth and St. Paul. The monitors measured air toxics, PM 2.5 and total suspended particulate. The results from these monitoring sites are compared to ongoing monitoring site data and shared with community members. A final report for the first two years of monitoring was completed in 2016. In order to better compare results from these monitors to existing permanent sites, the MPCA is extending the run of monitoring in the future to a full year for future monitoring.

North Minneapolis TSP Monitoring: The MPCA continues to operate two monitors in and industrial area of North Minneapolis due to continued concerns over elevated levels of Total Suspended Particulates in an industrial area in North Minneapolis. The monitor continued to detect exceedances of the state standard regularly during FFY16 and the MPCA has been working with facilities in the area to identify and mitigate the sources of the exceedances. In

addition to voluntary efforts with some facilities, the MPCA is involved in legal actions to address possible contributions from one facility.

PAH Monitoring: With EPA Community-Scale Air Toxics grant funding, the MPCA, Minnesota Department of Health and the Mille Lacs Band of Ojibwe Department of Natural Resources concluded monitoring and analysis of results of a two-year project to monitor polycyclic aromatic hydrocarbons (PAHs) at 16 sites in an area of South Minneapolis of potential concern for environmental justice. Sampling sites were chosen in part from community input. Project results were presented to community members and a full report was submitted to the EPA in FFY16.

MPCA and Minnesota Department of Health Joint Initiative of Respiratory Disease

The MPCA and MDH continued work on a joint initiative related to air pollution and respiratory health in Minnesota. Major work in FFY16 included three Health Impact Assessments (led by MDH) and work on our website BeAirAwareMN.org, a resource for citizens, communities, and businesses concerned about health and air quality. The site distills and simplifies information about all major air pollutants in Minnesota — both outdoor air and indoor air. The site includes:

- Tips to protect you and your family
- Current air condition and forecasts
- Relevant research about air pollution
- Actions for communities and employers

Improving Minneapolis Air – Pilot Project

The MPCA continued work on a pilot project to improve air quality in Minneapolis through collaboration with community stakeholders, local government and 12 of the largest permitted air emission sources in the city. While the long-term goal is to improve air quality, the shorter-term objectives are to improve our understanding of the facilities' emissions.

EPA Response (January 2017)

EPA is pleased with the results of this priority, especially as they relate to outreach, community relations and integrating EJ into MPCA's overall work. As this joint priority concluded in FY17, EPA is interested in knowing a bit more about the results, especially from the Improving Minneapolis Air Pilot Project. The reporting paragraph from MPCA from this portion of the priority has been essentially the same for the last three years. What kind of progress has been made in improving relationships with the community? Have emissions estimates from the facilities been refined? Have emissions been reduced? Are there compliance problems with any of the facilities that are being addressed by MPCA or are concerns more of a community perception issue?

EPA is pleased that the PAH monitoring furthered MPCA's laboratory methods and information on PAH sources that was not previously available, and that MPCA is making this information available to the public. The interactive maps on MPCA's website provide an excellent tool for communicating project outcomes to the public. Publishing the outcomes of the study will also benefit other researchers and further the study of PAHs.

MPCA Response (March 2017):

The MPCA began a pilot project in 2014 designed to identify ways to reduce air emissions, better understand air quality in Minneapolis, and improve engagement with communities. Twelve facilities with air permits agreed to participate in the project. These facilities are all located in areas of concern for environmental justice, and there is significant community concern about the emissions from many of them. In the first year of the project, MPCA staff brought representatives of the facilities together to

learn about environmental justice and begin to discuss voluntary actions facilities might take to reduce their impact on air quality.

In February of 2016, MPCA staff again met with representatives of the facilities as a group. Attendees learned about and discussed cumulative effects, and how the communities in which the facilities are located likely have a higher number of stressors, both related to pollution and other stressors, that are making them more vulnerable to the health impacts of pollution. MPCA staff also highlighted the ways in which additional data on facility emissions could lead to greater clarity in permitting and a deeper understanding of air quality concerns in Minneapolis, and requested assistance from the facilities in getting this data. Additionally the group discussed ways to increase and enhance engagement with their surrounding communities, identify and address their concerns, and make positive contributions that would improve their quality of life.

The goals of the Minneapolis air pilot project were broadened in 2016 beyond those 12 facilities, to include other ways in which the MPCA might work to improve air quality in Minneapolis. Examples include: working with MPCA Small Business Assistance staff to target grant and assistance programs for reducing volatile organic compounds (VOC) in areas of concern for environmental justice; and collaborating with the Minnesota Technical Assistance Program (MnTAP) to secure host sites in the Phillips neighborhood of south Minneapolis for interns who will work with small businesses on identifying and implementing pollution prevention opportunities. Additionally, MPCA staff strengthened relationships and increased communication with staff at the City of Minneapolis about programs with similar goals as the Minneapolis air pilot project, such as the Minneapolis Green Zones and Green Business programs. This regular communication and collaboration between MPCA and City staff has increased the impact of all efforts.

Next steps for the Minneapolis air pilot project include site visits with each of the 12 facilities participating. Through these visits, staff from the MPCA, City of Minneapolis, and MnTAP will identify opportunities for pollution prevention including air emissions reductions, offer information and best practices to improve engagement with the surrounding community, and gather additional data on emissions. Additionally, in 2016 MPCA staff began working with one of the 12 facilities involved with the project, Metro Transit's Heywood Garage, on ways to reduce the environmental impact of a proposed expansion project, identify opportunities for positive contributions, and improve community engagement.

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

At EPA Region 5, Carlton Nash (312) 692-2543 or nash.carlton@epa.gov

Impaired Waters

October 1, 2012 – September 30, 2016 (FFY 2013-2016)

FFY 2016 REPORT

Statement of Environmental Problem/Issue:

Based on Minnesota's proposed 2016 impaired waters list, there are 2657 impairments (on 687 lakes basins, 25 wetlands, 7 beaches, and 1938 river segments) that remain to be addressed by a TMDL. Minnesota is committed to using the impaired waters approach to restore water bodies 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". (Minn. Stat. ch. 114D)

Following passage of the CWLA, stakeholders wanted to ensure a long-term source of sustainable funding for restoring and protecting Minnesota's waters. A further campaign with additional stakeholders resulted in a ballot initiative to amend Minnesota's Constitution. On November 4, 2008, Minnesota voters approved the Clean Water, Land and Legacy Amendment to *protect drinking water sources; to protect, enhance, and restore wetlands, prairies, forests, and fish, game, and wildlife habitat; to preserve arts and cultural heritage; to support parks and trails; and to protect, enhance, and restore lakes, rivers, streams, and groundwater.*

The Amendment increased Minnesota's sales and use tax rate by three-eighths of 1% on taxable sales, starting July 1, 2009, continuing through 2034. One-third of those funds are dedicated to a Clean Water Fund (CWF) to protect, enhance, and restore water quality in lakes, rivers, streams, and groundwater, with at least 5% of the fund targeted to protect drinking water sources. When passed, it was explicitly stated that these funds are to supplement, not supplant, existing funding for state agencies.

The MPCA received \$51.16M for the FY2010-11 biennium from the newly created CWF. Activities funded included significantly enhanced monitoring, TMDL and protection strategy development, and implementation. For the FY2012-13 biennium, the MPCA received 47.7 M for these activities.

To continue steady progress with the implementation of our watershed approach (see next section below), the MPCA will continue to work closely with other Minnesota state agencies with water programs supported by the Clean Water Fund, along with the Clean Water Council, which provides funding recommendations to the Governor and the Legislature.

MPCA Program Priorities for FFY 2013-2016:

1. Implement Statewide Watershed Approach to prioritize and integrate Monitoring and Assessment, TMDL, and Restoration and Protection Activities.

To meet its responsibility to develop plans to restore impaired waters and protect waters from becoming impaired, the MPCA has developed a Watershed Approach, a holistic strategy through which the state's 81 major watersheds scale (i.e. primarily 8-digit level HUCs, with some exceptions) are monitored and TMDLs and protection plans are developed into one Watershed Restoration and Protection Strategy (WRAPS) Report for each watershed. The WRAPS are developed on a repeating, 10-year schedule. State law now requires that a WRAPS will be completed for at least 10% of Minnesota's major watersheds every year.

The Watershed Approach provides for better coordination between federal and state government and local partners, including watershed districts, consultants, non-profit groups, and citizens, by using the element of common interest – the health of the watershed – as its focal point. More information on The Watershed Approach can be found in the report submitted to the U.S. Environmental Protection Agency entitled, [Minnesota's Water Quality Strategy](#).

The Watershed approach is already increasing the efficiency and predictability of our work by integrating monitoring and assessment, TMDLs, and protection activities. This will be incorporated into the water plans of local government (watershed management organizations, soil and water conservation districts, counties and cities) who will develop and implement the detailed activities to implement the reductions called for in the WRAPS Report. Implementation funding for local implementers will be primarily provided by Minnesota's Board of Water & Soil Resources for nonpoint-related activities, and the Public Facilities Authority for wastewater and stormwater infrastructure projects.

FFY 2013 Report:

The 2013 Minnesota Legislature defined Watershed Restoration and Protection Strategies (WRAPS) in statute as follows:

Sec. 12. Minn. Stat. 2012, section 114D.15, is amended by adding a Subdivision to read:

Subd. 13. Watershed restoration and protection strategy or WRAPS. "Watershed restoration and protection strategy" or "WRAPS" means a document summarizing scientific studies of a major watershed no larger than a hydrologic unit code 8 including the physical, chemical, and biological assessment of the water quality of the watershed; identification of impairments and water bodies in need of protection; identification of biotic stressors and sources of pollution, both point and nonpoint; TMDL's for the impairments; and an implementation table containing strategies and actions designed to achieve and maintain water quality standards and goals.

The legislature further prescribed content for WRAPS as follows:

Sec. 13. [114D.26] WATERSHED RESTORATION AND PROTECTION STRATEGIES.

Subd. 1. Contents. The Pollution Control Agency shall develop watershed restoration and protection strategies. To ensure effectiveness and accountability in meeting the goals of this chapter, each WRAPS shall:

- (1) identify impaired waters and waters in need of protection;
- (2) identify biotic stressors causing impairments or threats to water quality;
- (3) summarize watershed modeling outputs and resulting pollution load allocations, wasteload allocations and priority areas for targeting actions to improve water quality;
- (4) identify point sources of pollution for which a national pollutant discharge elimination system permit is required under section 115.03;
- (5) identify nonpoint sources of pollution for which a national pollutant discharge elimination system permit is not required under section 115.03, with sufficient specificity to prioritize and geographically locate watershed restoration and protection actions;
- (6) describe the current pollution loading and load reduction needed for each source or source category to meet water quality standards and goals, including wasteload and load allocations from TMDL's;
- (7) contain a plan for ongoing water quality monitoring to fill data gaps, determine changing conditions, and gauge implementation effectiveness; and
- (8) contain an implementation table of strategies and actions that are capable of cumulatively achieving needed pollution load reductions for point and nonpoint sources, including:
 - (i) Water quality parameters of concern
 - (ii) Current water quality conditions
 - (iii) Water quality goals and targets by parameter of concern
 - (iv) Strategies and actions by parameter of concern and the scale of adoptions needed for each
 - (v) A timeline for achievement of water quality targets
 - (vi) The governmental units with primary responsibility for implementing each watershed restoration or protection strategy
 - (vii) A timeline and interim milestones for achievement of watershed restoration or protection implementation actions within ten years of strategy adoption.

Subd. 2. Reporting. Beginning July 1, 2016, and every other year thereafter, the Pollution Control Agency must report on its Web site the progress toward implementation milestones and water quality goals for all adopted TMDL's and, where available, WRAPS's.

Subd. 3. Timelines; administration. Each year, the Pollution Control Agency must complete WRAPS's for at least 10% of the state's major watersheds. WRAPS shall be governed by the procedures for approval and notice in section 114D.25, subdivisions 2 and 4, except that WRAPS need not be submitted to the EPA.

FFY 2014 Report:

Since the passage of Minnesota Statutes Section 114D.15, subd. 13 and 114D.26, informally referred to as the Accountability Act, MPCA has crafted the components of WRAPS and refined templates for each report that makes up a WRAPS. Each WRAPS gathers all the data collected in a watershed and synthesizes it into useable information for improving water quality. The data is used to create an implementation table, which contains strategies and actions designed to achieve and maintain water quality goals. MPCA staff takes the lead on tasks such as project management, technical assistance, contract oversight, partner coordination, and civic engagement. As of 2013, the Snake River WRAPS was completed, with several other WRAPS statewide nearing completion (See Table 1). The Snake River WRAPS can be found here. <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/tmdl-projects/st.-croix-river-basin-tmdl/project-snake-river-watershed-restoration-and-protection-study.html>

WRAPS define reductions with strategies and milestones to achieve beneficial uses of clean water for Minnesota. The WRAPS summarizes scientific studies of the watershed, and includes:

- 1) Identification of impairments and water bodies in need of protection
- 2) Scientific analysis of impairments (TMDLs) that determine the sources of pollution and the reductions needed to meet water quality standards
- 3) Creation of an HSPF computer model for the physical, chemical, and biological assessment of the water quality of the watershed
- 4) Investigation of biotic stressors and sources of pollution (both point and nonpoint)
- 5) Civic engagement to ensure community and industry participation and understanding.

Table 1. Schedule for WRAPS completed to public notice stage.

FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Pomme de Terre River	Snake River (St Croix R)	Mississippi River Lake Pepin	Red Lake River	Lake Superior (S)	Lake Superior (N)	Rainy River (Headwaters)	Cloquet River	Rainy River (Rainy Lake)	Rainy River (Black R)
	Le Sueur River	Sauk River	Upper Red River	Nemadji River	Mississippi River (Headwaters)	Red Lake	Vermillion River	Mississippi River (Sartell)	Blue Earth River
	North Fork Crow River	Mississippi River (St Cloud)	Pine River	Upper Big Sioux River	Minnesota River (Mankato)	Des Moines River	Minnesota River (Headwaters)	Redwood River	Rapid River
	Buffalo River	Shell Rock River	Tamarac River	Lower Big Sioux River	Watonwan River	East Fork Des Moines River	Upper Iowa River	Upper St Croix	Rainy River (Baudette)
		Chippewa River	Cannon River	Zumbro River	Rum River	Lower Des Moines	Upper Wapsipinicon	Kettle River	
		Crow Wing River	Long Prairie River	Rock River	Clearwater River	Lower Minnesota River	Winnebago River	Cottonwood River	
		Cedar River	Redeye River	Little Sioux River	Marsh River	Roseau River	Lac Qui Parle River	Mississippi River (Brainerd)	
		Root River	Big Fork River	Grand Marais Creek	Wild Rice River		Mississippi River (Grand Rapids)		
		Sandhill River	St. Louis River	Lake of the Woods			Mississippi River (La Crescent)		
		Mustinka River	Bois de Sioux River	Snake River (Red River)			Mississippi River (Reno)		
		Little Fork River	South Fork Crow River	Two Rivers			Otter Tail River		
		Minnesota R (Yellow Med R)	Leech Lake River						
		Thief River	Mississippi River (Twin Cities)						
		Mississippi River (Winona)	Lower St. Croix River						

Future endeavors include sharpening the guidance for protection of unimpaired waters, finalizing the outlay of the implementation table, incorporation of the Nutrient Reduction Strategy, and other improvements to WRAPS processes. Process improvements are also being scheduled.

FFY 2015 Report:

MPCA has continued to implement the Minnesota Watershed Approach to efficiently characterize the state's waters and integrate all water quality activities. A state budget cut, in addition to a small federal budget cut, required us to revise the schedule for WRAPS, as noted in the table below. The 10-year cycle will be extended, unless further adjustments are made to the budget. See Table 2.

MPCA is working with the Minnesota Department of Natural Resources (DNR) to develop guidance on protection of lakes and streams. Based on the data available and computer modeling, a draft version has been completed for lakes. The process includes several factors such as proximity to the impairment threshold, long-term trend data, sensitivity of the lake to future phosphorus inputs, and other factors to determine how to prioritize lakes within a watershed. Guidance is also provided for a protection standard, based on a combination of all results and the water quality standard. This will be a more conservative approach than defaulted to the water quality standard. Further development is needed for local input into protection priorities. The next challenge will be streams and rivers, for both prioritization for protection and protection standards.

Table 2. Schedule for WRAPS completed to public notice stage, updated for 2015 budgets.

2014	2015	2016	2017	2018	2019	2020	2021	2022
Crow Wing River	Buffalo River	Big Fork River	Lake of the Woods	Cleanwater River	Des Moines River Headwaters	Kettle River	Vermilion River	Blue Earth River
Mississippi River-Saint Cloud	Cedar River (Headwaters)	Bois de Sioux River	Lake Superior - North	East Fork Des Moines River	Lower Des Moines River	Lac qui Parle River		Cottonwood River
North Fork Crow River	Chippewa River	Cannon River	Lake Superior - South	Lower Minnesota River	Rainy River - Headwaters	Minnesota River - Headwaters		Lower Rainy
Pomme de Terre River	Le Sueur River	Leech Lake River	Minnesota River - Mankato	Red River North - Marsh River	Roseau River	Mississippi River - Brainerd		Rapid River
Snake River (St. Croix Basin)	Lower Saint Croix River	Little Fork River	Mississippi River - Headwaters	Snake River (Red River Basin)	Upper Iowa River	Mississippi River - Grand Rapids		Redwood River
	Mississippi River - Lake Pepin	Little Sioux River	Nemadji River	Wild Rice River	Upper Wapsipiconic River	Mississippi River - La Crescent		Rainy River - Rainy Lake
	Mississippi River - Winona	Long Prairie River	Red River North - Grand Marais		Upper/Lower Red Lake	Mississippi River - Reno		
	Mustinka River	Lower Big Sioux River	Rum River		Winnebago River	Mississippi River - Sartell		
	Sauk River	Mississippi River - Twin Cities	Two Rivers			Otter Tail River		
	Shell Rock River	Pine River	Watonwan River			Upper Saint Croix River		
		Red Lake River	Zumbro River			Cloquet River		
		Red River North - Sandhill River						
		Red River North - Tamarac River						
		Redeye River						
		Rock River						
		Root River						
		South Fork Crow River						
		St. Louis River						
		Thief River						
		Upper Big Sioux River						
		Upper Red River North						
		Minnesota River - Yellow Medicine						

EPA Comment:

MPCA deserves kudos for working with DNR on a protection standard for unimpaired waters as part of the Watershed Approach.

FFY 2016 Report:

The Minnesota Watershed Approach continues to cover the state systematically, with each HUC8 watershed being monitored for condition, studied for stressor identification and modeled with HSPF. This information is used to develop TMDL studies and the WRAPS reports. This year, additional focus was on standardizing community engagement, to outline objectives, responsibilities, measures, and other factors to help inform MPCA staff and management. Gathering feedback from sponsors that have participated in the WRAPS process will also be a major emphasis in the coming year.

The protection guidance on lakes has been mostly finalized and should be in pilot phase this coming year. Protection guidance for streams is in development.

Minnesota has successfully implemented the statewide Minnesota Watershed Approach that integrated monitoring and assessment activities, TMDL studies and restoration and protection activities. State engagement with the communities is growing and will continue to be refined in the coming years with additional input from our cooperators.

2. 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, which began in October 2008, developed specific measures, a measurement tracking system, and pilot projects to evaluate the framework. To help implement this phase, the MPCA volunteered to participate in an EPA pilot on program effectiveness. EPA provided a consultant to assist the MPCA and its partner agencies over two years to help facilitate the process.

In February 2012, Minnesota agencies released their first collaborative report. It is designed to help clarify connections between Clean Water Funds invested, actions taken and outcomes achieved in FY2010-2011. Eighteen measures in the report provide a snapshot of how Clean Water Fund dollars are being spent and what progress has been made. The measures are organized into three sections: investment, surface water quality, and drinking water protection. Each measure has detailed status ranking and trend information.

Overall, the report shows the state is on track with its investments, though challenges remain. Of the 18 measures, status and trends vary; six measures showed improving trends, 11 showed no trend or were too early to assess, and one showed a slightly declining trend.

It is important to note that the report does not include information on other ongoing water-related work, as it would be impossible to measure everything in one report or project. This report is the beginning of what is to come over the next 25 years in outcome-based water quality data and information.

The FY2010-2011 final report, the summary document and the metadata sheets can be found on [Minnesota's Legacy website: http://www.legacy.leg.mn/funds/clean-water-fund](http://www.legacy.leg.mn/funds/clean-water-fund).

FFY 2013 Report:

A new FY 2012 -2013 Report will be released in January of 2014. This report will have two more years of data to start to show trends on key measures. In addition, since the last report was released, the Interagency Team has been working to develop two new areas of measures: key stressor or pressure measures to help put our other measures in context over time and social measures to measure how well our environmental work is connecting to Minnesotan's understanding of water quality issues and changes of behavior over time. Social science has not been a strength of the team and outside experts were sought to help guide our thinking. The pressure measures will be presented in the 2014 report. More work will be necessary to integrate the social measures work with our environmental measures.

FFY 2014 Report:

A new FY 2012 -2013 Report was released in January of 2014. This report has more data to start to show trends on key measures. This report also highlights key stressor or pressure measures to help put our other measures in context over time and social measures to measure how well our environmental work is connecting to Minnesotan's understanding of water quality issues and changes of behavior over time

FFY 2015 Report:

We are currently beginning work on a new Clean Water Fund Performance Report for 2014-2015. In addition, by July 2016, in accordance with Minnesota Statutes Chapter 114D.26, subd. 2, the MPCA is required to report then and every other year thereafter, the progress toward implementation milestones and water quality goals for all adopted TMDLs and, where available, WRAPs. This reporting must be done on the MPCA website. We have reviewed several concepts, including the Chesapeake Bay stat site, to develop a format for these measures. In July 2016, the report may be a pdf, as we continue to develop a real-time method for showing pollutant loads reduced by conservation practices installed statewide. NRCS has agreed to provide data on the HUC12 scale as their requirements allow, and work is ongoing without the need for an MOU at this point. The staff on both sides continues to have a good working relationship that allows productive efforts.

FFY 2016 Report:

The 2016 [Clean Water Performance Report](#) successfully portrays the use and results of funds from the Clean Water, Land and Legacy Amendment for clean water activities in Minnesota. The report has been praised for presenting the results with clarity and in a transparent manner.

Minnesota Statutes Chapter 114D.26, subd. 2, affectionately referred to as the Clean Water Accountability Act (CWAA), set forth the requirements cited above, and this first year's effort resulted in reports for seven major or HUC8 watersheds, and can be found here:

<https://www.pca.state.mn.us/water/clean-water-fund>. Development is continuing, with a goal to report yearly if possible. The statutory requirement is for every other year.

3. 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, called the Watershed Data Integration Project (WDIP), 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, 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 was completed at the end of FFY09.

Because of support from the Clean Water Fund, the MPCA continues to make progress with the WDIP. Phase 3 of WDIP, to be completed in June 2013, undertakes a variety of data integration and stabilization initiatives. These are vital to building a foundation for future progress in the WDIP in order

to provide access to water quality data, transparency and accountability for watershed activities. Right now WDIP has 12 IT projects. Three are completed, six are active and three are pending.

Outcomes from the completed projects include:

- Overall data clean-up that allowed the watershed webpages to accurately display monitoring, assessment and implementation activities
- Internal water body search tool - access via the Launchpad, or at http://cf.pca.state.mn.us/water/watershedweb/wdip/search_more.cfm (map tab)
- External data retrieval tool for accessing monitoring and assessment information on water bodies. <http://cf.pca.state.mn.us/water/watershedweb/datasearch/waterSearch.cfm>.
- Electronic documentation of interagency measures and outcomes

More than 100 staff and management play an integral part in the success of this on-going effort, participating in roles ranging from project sponsors and subject matter experts, to IT analysts and developers. For further information, go to: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/watershed-approach/watershed-data-integration-project.html>.

EPA will be looking for potential transferability of what is accomplished here to other states.

FFY 2013 Report:

The 2013 Minnesota Legislature awarded additional funding to the MPCA to continue work on integrating internal data systems that will provide better data capture, tracking and reporting for the watershed approach. The focus of WDIP work for the next two years of funding is to develop a better water assessment database and create an IBI (Index of Biological Integrity) database, in addition to the broader effort of developing a more robust watershed data tracking system that will enable greater transparency and reporting flexibility within the MPCA and on our website.

The timing of this work aligns with a larger MPCA undertaking to replace the agency's primary data system (Delta.) This project is scheduled for the next two years and will likely involve additional enhancements into the future to meet all the agency's needs. Many of the WDIP goals can be met through the new agency data system (Tempo360), and there is currently extensive review occurring to assess the functionality of the new system in relation to the expected WDIP deliverables. However, WDIP continues to work on developing deliverables that can either be migrated into the new data system or easily linked.

In the past quarter, significant progress has been made on implementing a new reporting structure that allows for easy internal access to watershed project data. The highlight of these recent efforts was the data linkage between our watershed data system (Delta) and the state's fiscal accounting system (Swift.) This linkage now provides MPCA with real-time data (with just an overnight data refresh) on project activity milestones and project spending. Additional enhancements in the coming months will include search capabilities by date, geography, and additional impairment data.

FFY 2014 Report:

In FFY 2014, further enhancements were made to the "Watershed Management Tracking" reporting structure that allows for internal access to watershed project and financial data. The ability to create reports based on geopolitical data is now available, and the quality and accuracy of the financial data being displayed continues to be refined. In addition, new milestone tracking reports were created using this structure. A new tool that allows MPCA staff to associate different types of projects, including non-MPCA projects, with the major watershed was developed and is now being used to create more robust watershed reports. The baseline report that will pull data from that project cross-reference initiative is currently in development.

The MPCA's initiative to replace the agency's primary data system (Delta) with TEMPO360 is now well under way. A plan of action was established to integrate, convert or sunset any existing Watershed applications to be addressed by TEMPO360. This project is focused on ensuring watershed applications built through WDIP continue to operate during and after the TEMPO360 conversion.

The Water Assessment and Listing Information System (WALIS) project consolidates several disparate but related water assessment and listing databases into an integrated, non-redundant architecture and convert their data into the new environment. Development work and testing occurred throughout the year and will be ongoing until completion.

Throughout the upcoming year, MPCA will continue to implement data integration and access improvements with the goal of creating a properly organized and efficient data structure underlying all current and future surface water-related systems.

FFY 2015 Report:

MPCA's initiative in TEMPO360 is scheduled to go live in April 2016 for the "Watershed Management Tracking." A select group of staff have been working on testing and training development this fiscal year. The all-staff training is planned for early next year.

Work on the Water Assessment and Listing Information System (WALIS) project consolidates continues. As of November 2015, the system is partially functional and is being used to prepare the draft 2016 impaired waters list. MPCA will keep EPA apprised of the schedule for full implementation of the new WALIS system.

FFY 2016 Report:

MPCA's initiative in TEMPO360 went live as scheduled in 2016 for the "Watershed Management Tracking." All staff were trained on the use of TEMPO360 for both financial and project work. Deadlines are set for project managers to conduct quality checks for TMDL migration, and enter dates for public notice of each upcoming WRAPS. Other similar work will be checked or entered through the winter.

Work on the Water Assessment and Listing Information System (WALIS) project consolidates continues. As previously indicated, the system was used to prepare the draft 2016 impaired waters list. Currently, testing on the full system is occurring and all results look very good. The project is coded as "green" and is well on schedule now that appropriate resources have been hired. The system will be operational by October of 2017.

4. Special Joint Projects with EPA

In addition to the effectiveness, measures project discussed in #2 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, Lake Pepin TMDL Implementation Plan, and Nutrient Reduction Strategy to reduce hypoxia problems in the Gulf of Mexico. As a member of the Hypoxia Task Force, Minnesota is developing State Level Nutrient Reduction Strategies concurrently with sister states and consistent with the Hypoxia Action Plan and EPA guidance in the Nancy Stoner memorandum titled "Working with States..." March 16, 2011. Minnesota's strategies will build on the watershed approach targeting pollutant reduction and water quality protection in each of the state's 81 HUC8 watersheds by addressing nutrient reductions needed for waters at a scale of HUC 8 and greater (ex. Minnesota River, St Croix River, and Lake Pepin) as well as downstream of Minnesota. The pollutant reduction programs that the state has established will be assessed and recommendations for programs needed to meet milestone nutrient reductions will be provided. The primary goal of these strategies will be meaningful and achievable interim nutrient load reduction to Minnesota and downstream waters. The Minnesota Nutrient Reduction Strategy is

completed and is available on the nutrient website at www.pca.state.mn.us/nutrientreduction. A complementary communication website for HUC8 level rapid nutrient assessments and titled the Nutrient Planning Portal is available at: <http://mrbdc.mnsu.edu/mnnutrients/>. Recommendations for tracking progress of nutrient reduction will be a component of the State Level Strategies.

In addition, the MPCA has partnered with EPA's Healthy Watershed Initiative to conduct a pilot project in the Snake River Watershed. We are participating with The Nature Conservancy, the Department of Natural Resources, and several local partners to develop the protection elements of our WRAP for the Snake, utilizing expertise of EPA's contractor, Cadmus Consulting, to identify priority protection areas and how to sequence protection activities in the watershed. The results of this work will also serve as a pilot to help the MPCA design its protection strategies for watersheds throughout the state.

FFY 2013 Report:

A Draft state nutrient reduction strategy has been completed and is open for public and stakeholder review until Dec 18, 2013. The strategy includes geographic priorities and sources, Goals and baselines for reduction efforts and identifies needed reductions to meet milestone goals and programs to help implement those reductions at the state's three major drainage basins. It also sets targets for reduction planning at the HUC8 level. The strategy reports that the state is on target to have River Eutrophication Standards by 2015 and calls for continued action on a nitrogen toxicity standard for Rivers. The draft strategy is available on the nutrient reduction website.

FFY 2014 Report

Minnehaha Creek

MPCA completed the "Minnehaha Creek Bacteria and Lake Hiawatha — Excess Nutrients TMDL" in collaboration with the Minnehaha Creek Watershed District and EPA. The project was largely funded by EPA and was approved in February 2014.

Nutrient Reduction Strategy

The Minnesota Nutrient Reduction Strategy (NRS) is completed and is available on the nutrient website at www.pca.state.mn.us/nutrientreduction. A complementary website for communicating the NRS and providing HUC8 level rapid nutrient assessments, which is named the Nutrient Planning Portal, is available at <http://mrbdc.mnsu.edu/mnnutrients/>.

EPA's Healthy Watershed Initiative

In May of 2013, EPA's consultant, Cadmus Group, submitted a final Healthy Watershed Initiative Report. The report name [Aquatic Ecosystem Protection Efforts in Minnesota's Snake River Watershed: Summary and Recommendations](#), was posted on our website. Overall, the report identified five recommendations for ways to enhance existing efforts and help fill gaps:

1. Conduct a detailed review of city, township, county, and state ordinances to identify opportunities to strengthen protections.
2. Encourage civic engagement, collaboration, and coordination among state agencies, conservation groups, counties, and watershed organizations to strengthen watershed protection efforts.
3. Conduct a detailed systems-based analysis using existing datasets and tools to prioritize specific areas for protection.
4. Develop an inventory of culverts and dams within the watershed and prioritize them for restoration or removal to improve aquatic connectivity.
5. Assess the presence and prevalence of invasive species within the Snake River Watershed.

These recommendations have been brought in as some of the actions identified in the [Snake River Watershed Restoration and Protection Strategy Report](#) that was approved by the MPCA in August of 2014. This report lays out the strategies necessary to not only restore the impaired waters but also identifies actions necessary to protect the unimpaired waterbodies.

The MPCA has partnered with EPA's Healthy Watershed Initiative to conduct a pilot project in the Snake River Watershed. We are participating with The Nature Conservancy, the Department of Natural Resources, and several local partners to develop the protection elements of our WRAP for the Snake, utilizing expertise of EPA's contractor, Cadmus Consulting, to identify priority protection areas and how to sequence protection activities in the watershed. The results of this work will also serve as a pilot to help the MPCA design its protection strategies for watersheds throughout the state.

FFY 2015 Report:

No new projects with EPA were done this year. We are touching base with NRCS and will tour the NQWI sites in the fall of 2015 and spring of 2016, to check on progress and determine if there are other opportunities for water quality improvements.

FFY 2016 Report:

Again, no new projects with EPA were done this year.

Activity has revived on the NWQI sites in Minnesota. We toured two NWQI sites: Seven Mile Creek on December 16, 2015 and Elm Creek on July 28, 2016. Both tours included participants from NRCS, SWCDs, non-profits and others, as well as MPCA. The needs of the watersheds, along with some shortcomings of the NWQI program, were discussed, and opportunities for water quality improvements were noted and will be reviewed and acted on in the future.

TMDL Priorities:

As of May 2012, the MPCA has received EPA approval of, 1,355 TMDLs – 239 for waters impaired by conventional pollutants and 1,096 for mercury-impaired waters. Overall, as of the 2010 approved impaired waters inventory, 66% of total TMDLs needed for conventional impairments are underway or in implementation, and 68% of TMDLs needed for toxic impairments

The MPCA's top priority is to continue to initiate eight major watershed projects per year through our watershed approach. Currently, intensive monitoring projects are completed or underway in 52% of Minnesota's watersheds, while WRAP strategies are underway in 42% of our 81 watersheds.

To continue to improve our efficiency, we are currently developing a standardized template for our WRAP Reports. We are working with local stakeholders and a consultant to create an approach that will ensure that our reduction targets, timelines, milestones, sources, and other key elements are clearly identified so that they can be effectively implemented into local water plans.

FFY 2013 Report:

A standardized WRAPS template was developed for use in all major watersheds. It can be found at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/watershed-approach/index.html>.

FFY 2014 Report

River, lake, and wetland impairments (2014 proposed inventory): The MPCA has received EPA approval of 1,686 impairments that needed TMDL studies as of October 2014. 1,272 of those are for mercury. Non-mercury impairments: 2,109 of the 2,452 listed impairments are in development (86% of total TMDLs needed) and 413 TMDLs are approved/in implementation (99 approved projects).

Progress and Outcomes to Date

- Four of the 80 WRAPS have been completed and approved by MPCA (Pomme de Terre River Watershed, Snake River Watershed, Sunrise River Watershed and Mississippi River-Lake Pepin Tributaries Watershed).
- **Restored waters:** 35 previously impaired lakes and river segments (15 lake impairments and 20 river impairments on 18 river segments) have been restored to water quality standards.

The MPCA's top priority is to continue to initiate eight major watershed projects per year through our watershed approach. Currently, intensive monitoring projects are completed or underway in 72% of Minnesota's watersheds, while WRAP strategies are underway in 59 of our 80 watersheds (74%).

Additional guidance documents and templates were developed in 2014 for WRAPS and TMDL projects and work continues on the WRAPS template to incorporate the requirements of the Clean Water Accountability Act. [Lakes in WRAPS Guidance document](#) was developed for addressing lakes in WRAPS. Stressor ID Report Technical Guidance and Report Template were developed. Local partners may find this technical guidance useful for stressor identification work. Also, a TMDL Report Template has been developed.

FFY 2015 Report:

The "Prioritization Plan for Minnesota 303(d) Listings to Total Maximum Daily Loads" has been drafted by MPCA and submitted to EPA (approved in October 2015). This report meets the needs EPA's Long Term Vision for Assessment, Restoration and Protection under the Clean Water Act Section 303(d) Program. The "Prioritization Plan for Minnesota 303(d) Listings to TMDLs" (i.e., the "Prioritization Plan"), will address the Prioritization Goal Statement in EPA's framework for implementing the Clean Water Act Section 303(d) Program: *"Prioritization" For the 2016 integrated reporting cycle and beyond, States review, systematically prioritize, and report priority watersheds or waters for restoration and protection in their biennial integrated reports to facilitate State strategic planning for achieving water quality goals.* (From *A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program.*)

While the specific requirements of this federal effort do not align perfectly our existing Minnesota Watershed Approach, we understand the need for a national measure and can accommodate the Region 5 request in this context. MPCA is committing to develop TMDLs for the specified segments in this report for conventional pollutants by 2022, following the schedule for our Watershed Restoration and Protection Strategies (WRAPS) report completion schedule. The baseline acreage for these segments is 600,751 acres and the universe is 6,573,576 acres. For FFY2016, the segments addressed by TMDLs should consist of 899,564 (which include the baseline of 600,751 acres).

Due to negotiations by the USGS and their Canadian equivalent, there are now 80 (not 81) HUC8 watersheds in Minnesota. Eight of the 80 HUC8 WRAPS have been completed and approved by MPCA (Pomme de Terre River Watershed, Snake River Watershed, North Fork of the Crow River, Crow Wing River, Mississippi River Saint Cloud and Mississippi River-Lake Pepin Tributaries).

The 2014 proposed inventory of river, lake and wetland impairments should have EPA approval soon.

FFY 2016 Report:

MPCA has committed to develop TMDLs by following the schedule for our Watershed Restoration and Protection Strategies (WRAPS) report completion schedule and as outlined generally in the "Prioritization Plan for Minnesota 303(d) Listings to Total Maximum Daily Loads," as drafted by MPCA and submitted to EPA (approved in October 2015). The baseline acreage for these segments is 600,751 acres (TMDLs already completed) and the universe is 6,573,576 acres (TMDLs to be completed by 2022).

For FFY2016, the goal for segments addressed by TMDLs were 899,564 (which include the baseline of 600,751 acres). The actual results were 845,696 acres, or 94% of the goal. We are currently analyzing the data to determine where and why the shortfall occurred.

Fifteen of the 80 HUC8 WRAPS have been completed and approved by MPCA:

Snake River Watershed (St. Croix Basin)
North Fork Crow River Watershed
Crow Wing River Watershed
Mississippi River-Saint Cloud Watershed
Buffalo River Watershed
Mustinka River Watershed
Sauk River Watershed
Redeye River Watershed
Pomme de Terre River Watershed
Le Sueur River Watershed
Cannon River Watershed
Mississippi River-Winona
Mississippi River-Lake Pepin
Root River Watershed
Yellow Medicine River Watershed

We anticipate that the FY2014 and FY2016 proposed inventory of river, lake and wetland impairments or 303(d) lists should have EPA approval soon.

Implementation Priorities:

Through Clean Water Fund appropriations, implementation projects are being supported in almost every watershed in the state. Nevertheless, demand still out paces available funding. As a result, the MPCA working with BWSR and other state agencies have directed significant resources towards improving our prioritization and targeting tools to better understand where funding can have the highest impact. Targeting will be improved through LiDAR, which has been completed for the entire state, as well as through other geospatial tools. New criteria have been set in state funding programs to improve accountability and effectiveness. The MPCA looks forward to reporting progress in this area over the next three years.

FFY 2013 Report:

There were ten (10) MPCA approved Implementation Plans in FFY13.

The Clean Water Accountability Act was promulgated in 2013; specifying the content, timeline and funding priorities for developing Watershed Restoration and Protection Strategies (WRAPS). Fortunately, a new template for the WRAPS was already underway and will provide a key tool to help with the tracking for accountability and progress toward clean water. The WRAPS Report template will utilize tools and processes that are now available and cost effective to analyze the data, including: stressor identification, Hydrologic Simulation Program FORTRAN (HSPF) modeling, and spatial analysis. These tools will provide valuable information and lead to prioritization, targeting and documentation of restoration and protection strategies that were not possible a few years ago. The template will provide consistent expectations of data quality and analyses valuable to inform local planning as well as assist with prioritized targeting of implementation efforts.

FFY 2014 Report:

There were seven (7) MPCA approved Implementation Plans in FFY14.

The Clean Water Accountability Act was promulgated in 2013; specifying the content, timeline and funding priorities for developing Watershed Restoration and Protection Strategies (WRAPS). The WRAPS report template that was developed in 2013 continues to be improved to incorporate the requirements of the Clean Water Accountability Act and will provide a key tool to help with the tracking for accountability and progress toward clean water. The template will provide consistent expectations for data quality and analyses valuable to inform local planning as well as assist with prioritized targeting of implementation efforts. The completed WRAPS reports will provide valuable information and lead to prioritization, targeting and documentation of restoration and protection strategies that were not possible a few years ago. Furthermore, efforts are underway to develop a data system to capture the WRAPS report data elements, making it possible to link implementation Best Management Practices (BMPs) with the strategies in the Implementation Tables. The MPCA is legislatively mandated to begin reporting on progress toward implementation milestones and water quality goals for all adopted TMDLs and, where available, WRAPS, on its web site beginning July 1, 2016.

FFY 2015 Report:

The last MPCA Implementation Plans have been written and any new plans will be done in WRAPS Report format. The WRAPS report format and the grantee's 319 work plan should meet the requirements for EPA's nine key elements. We are currently working with Region 5 to determine if further changes are needed.

This year, MPCA applied for an exemption to the 319 guidelines, as three proposed projects did not meet the requirements of having an approved TMDL. MPCA was able to show that the state provided over \$5M for implementation through other funding routes, and the exemption was granted. The projects included in the \$5M of state funds will be entered into GRTS.

FFY 2016 Report:

This year, all projects met the requirements for EPA's nine key elements through the Section 319 Work Plans. Based on Michigan's template for check-off of the nine key elements, MPCA developed a version of the check-off, and also an MPCA Nine Element Review Tool for EPA 319 projects. These tools facilitated a quicker method to ensure that the nine elements were met and a quick guide on where to find each element. Further training and refinement of the Request for Grant Applications and work plans should make for a smoother 319 grant round this year. To ensure quality of this program, MPCA has proposed that the Minnesota Section 319 program be a Joint Priority for the next review period.

Additional information:

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

At MPCA, Teresa McDill at (651) 757-2303 or Teresa.McDill@state.mn.us

At EPA Region 5, Matthew Gluckman at 312-886-6089 or gluckman.matthew@epa.gov

Mining Permits

October 1, 2012 – September 30, 2016 (FFY 2013-2016)

FFY 2016 REPORT

Objective:

Complete timely NPDES permitting actions for metallic mining projects in Minnesota to address outstanding environmental issues, eliminate permit backlog, and issue permit decisions for construction projects.

Statement of Problem/Issue:

Water quality permits for the metallic mining sector are critical to the protection of surface waters. These permits are often associated with economic development, are under increasing public scrutiny, and involve complex permitting situations. As a result, NPDES permits for the metallic mining sector have a higher than average reissuance backlog and permit decisions for new or expanding facilities are often delayed.

Scope:

All new, expanding and existing metallic mining operations in Minnesota needing NPDES permits.

Strategy:

Complete a workload analysis and schedule for pursuing staffing revisions; identify permit priorities and schedules; identify necessary process improvements based on past experience and implement process revisions; develop standard operating procedure(s) to expeditiously move to final permit decisions.

The Metallic Mining Joint Priority will include identification and prioritization of metallic mining permitting projects, and streamlining/improving the permitting process to assure NPDES permit decisions in a timely manner and eliminate the permit backlog over a five-year period.

Work Load Analysis and Staffing

It is anticipated that significant additional staff resources will be needed to meet performance measures for this joint priority. The commitments in this joint priority are based on the assumption that the following activities are successfully completed:

By March 29, 2013 a work load analysis will be developed – MPCA lead. The workload analysis will include projections necessary to eliminate the metallic mining permit backlog to zero by July 1, 2018 and assure timely permit decisions for new construction (new and expanded mines) projects. The work load analysis will include known significant barriers to permit issuance and resources needed to address these barriers.

By April 30, 2013, EPA and MPCA will each independently develop staffing initiatives that reflect the workload analysis and meet the commitments of the joint priority.

By June 30, 2013, EPA and MPCA will each independently achieve approval of staffing initiatives.

By September 30, EPA and MPCA will complete hiring or assignment of staff identified in the respective staffing initiatives.

By December 31, 2013, newly assigned EPA and MPCA staffs will complete permit writer training and other training, as appropriate to achieve a level of expertise needed to issue metallic mining permits.

Permit Project Prioritization and Scheduling

By April 1, 2013, MPCA and EPA will develop a Metallic Mining Permit Priority List that will focus staff resources on critical construction projects and permit reissuances necessary to eliminate the permit backlog by July 1, 2018 (5 years). The Priority List will include tiered goals and performance measures based on staffing (fewer projects under current staffing levels and more projects under the level identified in the staffing initiatives). Assuming the scope including the 25 existing metallic mining permits identified below, performance measures should achieve an average of 1) work on two new permits, 2) complete five permit modifications, and 3) complete five permit reissuances per year over the next five years to achieve a 20% backlog reduction per year and issue construction permits. This prioritization and schedule will be evaluated and updated by EPA and MPCA by October 1, 2013 and annually thereafter.

MPCA will lead the development of the Metallic Mining Permit Priority List and proposed schedule for completing each of the active permitting projects. The initial Metallic Mining Permit Priority List is provided below and will be updated every 12 months. Permit project schedules will be reviewed and revised monthly via MPCA/EPA conference calls.

Metallic Mining Permit Priority List (Preliminary)

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
NEW	POLYMET	TBD		
MN0054089	CLIFFS ERIE, LLC-HOYT LAKES (combining 2 permits)	Minor	5/4/2001	11/30/2005
MN0042579	CLIFFS ERIE LLC-DUNKA	Minor	8/3/2000	6/30/2005
MN0055301	NORTHSHORE MINING/SILVER BAY P	Major	1/26/2004	9/30/2008
MN0057207	US STEEL/MINNTAC TAILINGS BASI	Minor	9/30/1987	7/31/1992
MN0050504	US STEEL CORP-MINNTAC WWTF	Minor	12/31/1984	12/31/1989
MN0069078	MESABI MINING/STEEL DYNAMICS	Minor	11/30/2007	6/30/2010
NEW	ESSAR EXPANSION	TBD		
NEW	TWIN METALS	TBD		
NEW	TECK	TBD		
NEW	DIRECT REDUCED IRON	TBD		
MN0070378	Magnetation LLC - Plant 4			NEW
	TOP PRIORITIES ARE ABOVE THIS LINE			
MN0044946	EVELETH MINES LLC DBA EVTAC	Minor	6/30/1999	5/31/2004

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
MN0055964	ISPAT INLAND MINING CO-MINORCA	Minor	9/29/2000	7/31/2005
MN0042536	CLEVELAND CLIFFS LLC	Minor	5/4/2001	11/30/2005
MN0052116	UNITED TACONITE, LLC	Minor	8/25/2005	7/31/2010
MN0052493	US STEEL CORP-RESERVOIR	Minor	1/7/2004	11/30/2008
MN0049760	Hibbing Taconite Co - Tails Basin Area			4/30/2000
MN0044946	United Taconite LLC - Thunderbird Mine			5/31/2004
MN0060151	DNR Soudan State Park			9/30/2008
MN0059633	ArcelorMittal Minnaca Mine Inc. - Laurentian			12/31/2011
MN0001465	Hibbing Taconite Co - Mining Area			5/31/2013
MN0069221	Magnetation Plant 1 & Mesabi Chief Tailings Basins			6/30/2013
MN0069400	Northshore Mining Co - Silver Bay Dredge Disposal			2/28/2014
MN0046981	Northshore Mining Co - Peter Mitchell			7/31/2014
MN0069868	Magnetation Plant 2			9/30/2015
MN0020249	Midland Research Center			7/31/2016
MN0055948	Keewatin Taconite Operations - Tailings			10/31/2016
MN0031879	US Steel Corp - Keetac			10/31/2016
MN0070050	Mining Resources LLC			10/31/2016
MN0068241	Essar Steel Minnesota LLC			9/30/2017

FFY 2013 Report:

MPCA's staffing initiative was only partially funded and also delayed until July 2014. We expect funding for one additional FTE for water quality permitting. In the meantime, we are shifting resources to the extent possible and continuing work to eliminate the mining permit backlog. The Metallic Mining Permit Priority List has been developed and is up to date. The Magnetation Plant 4 was reissued in May. EPA and MPCA staff toured the US Steel Minntac and Cliffs Erie sites in mid-August 2013. We continue to work through various issues in an effort to get these permits developed and on public notice. The Polymet supplemental draft EIS is nearing public notice and the various media permits are being developed concurrently. EPA is a cooperating agency and participates in biweekly update meetings.

Process Improvement

By June 30, 2013, EPA and MPCA will work together to develop Standard Operating Procedure(s) (SOP) for the development and review of Metallic Mining permits. The SOP shall include EPA and MPCA roles and responsibilities, and include generic time commitments for each step. The SOP shall describe EPA's early consultation on TMDL implementation, pre-TMDL impaired waters, compliance schedules, and complex effluent limit determinations. EPA and PCA will continue to work together on the variance process improvement effort currently underway.

To maximize permit decision making and processing, EPA and MPCA will work jointly on process improvement activities throughout the term of the PPA. Process improvement activities will include, but not be limited to, EPA/MPCA communications, communication with external parties, and addressing tribal concern. Initial improvements will focus on improved EPA/MPCA collaboration, development and improvement to permit templates, and avoiding duplication of work efforts.

As process impediments are identified EPA and MPCA agree to evaluate and resolve the impediment in a fixed period of time. If an issue is not resolved within the established period, it will be elevated to the Division Director (EPA) level and Assistant Commissioner (MPCA) level for resolution.

EPA Comments:

EPA developed a draft SOP and sent it to the MPCA on July 1, 2013. MPCA provided brief verbal feedback later that month. MPCA provided written revisions to EPA's draft SOP on December 23, 2013. Additional negotiation is needed to finalize the SOP. MPCA will work with EPA to schedule further discussions on this issue.

FFY 2014 Report:

Staffing – Adequate staffing continues to be a challenge. MPCA received funding for one additional FTE in water quality permitting beginning July 2014. This funding was delayed from original expectations when the joint priority was developed. In addition, it has been difficult to find qualified candidate that is willing to accept this position. Additional candidate interviews are scheduled with the hope of filling the position in the next 2 months. MPCA also lost a key mining unit supervisor who recently transferred to a private sector position. The supervisor position was filled internally.

EPA Comments: (Kuefler, Patrick)

The report identifies that the level of effort to date has not been sufficient to meet the joint priority objective and eliminate the permit backlog over a 5-year period nor does it provide significant actions or enhanced strategies intended to improve program performance or meet the joint priority objective going forward. MPCA should provide an enhanced strategy such as redeploying permitting staff from other NPDES industrial sector permitting groups to assist with processing the permits timely in accordance with the Joint priority.

[Additional Update] As of March 2015, total staffing for industrial permitting work (excluding WQ limits development) is 15 FTEs. Thirty of Minnesota's 826 NPDES/SDS industrial facilities are included in the Mining Permits Joint Initiative and 4.2 of the 15 FTEs are currently dedicated to these 30 mining permits. Assigning 28% of our staff resources to less than 4% of NPDES/SDS industrial facilities included in the Mining Permits Joint Initiative demonstrates an extremely high commitment to the joint priority. Two staff FTEs committed to mining projects are new staff that will require training. MPCA also has a manager, 2 supervisors and 2 project managers devoted to metallic mining. At a minimum, 1/3 to 1/2 of these FTEs are devoted to water quality. While the MPCA staff resource commitment to this joint priority remains very high, divergences on significant regulatory issues between the agencies remain. This makes issuance of any metallic mining permits in a timely manner difficult. We need EPA's cooperation in working through these issues if we are to continue committing a high level of staff resources to the joint priority. We would also like to know how many EPA staff FTEs are devoted to this priority, as it appears that only part of one staff is currently devoted to this priority.

EPA Comments (April '15):

Immediately following establishment of this joint priority EPA completed a workload analysis based on the anticipated workload associated with assisting MPCA in development of new and reissued mining permits and reviewing such permits. This analysis suggested that 5.0 FTEs would be necessary at EPA Region 5 to successfully manage this workload. Staff and managers within Region 5 (a total of 5 FTE) were assigned to this task and were prepared to handle the increased workload. Region 5 also alerted EPA Headquarters to the likely increased emphasis in this area of the program in anticipation of complex issues that could require policy level coordination. This workload has yet to materialize and the staff have been redeployed to active areas of the NPDES program. The current workload associated with EPA's commitment to this joint priority for NPDES mining permits in Minnesota is less than 1.0 FTE due to the low number of permit outputs. If "divergences on significant regulatory issues" is inhibiting MPCAs

ability to issue / reissue NPDES permits, these issues should be identified and prioritized for resolution.

Mining Permit Priority List – MPCA and EPA staff remain focused on several permit reissuances as well as new permits and permit modifications. By the end of 2014, we expect to have the US Steel Minntac Tailings Basin permit (which will include the WWTF) on public notice. We are also actively working on two permit modifications. MPCA proposes to update the Metallic Mining Permit Priority List as follows:

EPA Comments: (Kuefler, Patrick)

The priority list presented should be adjusted to reflect the goal of the joint priority. EPA recommends a revision to the list of permits/sites to ensure the objective of the priority is met. Mine permits that are not NPDES permits should be removed from the list for purposes of the joint priority and the remaining permits should be prioritized to reflect the need to address active discharges, potential environmental impact of those discharges and the duration of which the permit has been expired. EPA provides a recommended table of priority permits.

MPCA Response:

SDS permits were discussed as this joint priority was originally developed and EPA agreed to allow them to be included. The Objective states that construction projects are included in the joint priority. Some of these projects are SDS and therefore remain on the list. Given the unresolved regulatory issues, we believe both agencies benefit from working jointly on these permits. We agree with some of the proposed changes to the priority list. We do not agree to reducing the priority of Cliffs Erie Dunka. The state has made a commitment to the tribes to make this a high priority permit action and we need to follow-through on that commitment.

FFY 2015 Report:

Staffing - The MPCA has **three water quality permit writers focused on mining permits**. In addition, over 50% of the Mining Sector Manager and two supervisors are devoted to water permits [**EPA Comment:** Is this the reduction from the 4.2 FTE mentioned in the highlighted text above? We understood the MPCA was working to increase staff devoted to reissuing mining permits].

MPCA Response to EPA comment (Feb 2016):

Reviewing staffing levels in the same context as the March 2015 Update, approximately 30 of Minnesota's 800+ NPDES/SDS industrial facilities are included in the Mining Permits Joint Initiative and 3.2 of the 14 permitting FTEs are currently dedicated to these 30 mining permits. This is a reduction due to lack of funding to refill a vacated position. However, we maintain that assigning 22% of our staff resources to less than 4% of NPDES/SDS industrial facilities included in the Mining Permits Joint Initiative demonstrates a high commitment to the joint priority.

Project Prioritization and Scheduling - Water Legacy filed a Petition for Withdrawal of Program Delegation from the State of Minnesota for NPDES Permits Related to Mining Projects on July 2, 2015. MPCA is cooperating with EPA as they investigate this petition. Part of this investigation will include discussions about priorities, process, and any necessary changes to either priorities or process. [**EPA Comment/question:** Why is MPCA discussing the petition here? This is supposed to be an update on the progress MPCA has made to address the joint priority]

MPCA Response to EPA comment (Feb 2016):

The last update should have noted that our priorities have not changed except as noted below. We simply wanted to acknowledge that we are open to discussing priority adjustments in response to EPA's findings on the petition.

Please note the Priority List entries 'Essar Expansion' and 'Teck' have been deleted from the 2015 Priority List as these projects are no longer planned or are so far out in the future (more than 10 years) as to be purely speculative at this point.

FFY 2016 Report:
 Nothing additional to report at this time.

Metallic Mining Permit Priority List (Proposed Updates 11/1/15)

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
NEW	POLYMET	TBD		
MN0042579	CLIFFS ERIE LLC-DUNKA	Minor	8/3/2000	6/30/2005
MN0055301	NORTHSHORE MINING/SILVER BAY P	Major	1/26/2004	9/30/2008
MN0057207	US STEEL/MINNTAC TAILINGS BASI	Minor	9/30/1987	7/31/1992
MN0050504	US STEEL CORP-MINNTAC WWTF	Minor	12/31/1984	12/31/1989
MN0052493	US STEEL CORP-RESERVOIR	Minor	1/7/2004	11/30/2008
MN0046981	Northshore Mining Co - Peter Mitchell			7/31/2014
MN0049760	Hibbing Taconite Co - Tails Basin Area			4/30/2000
MN0001465	Hibbing Taconite Co - Mining Area			5/31/2013
MN0052116	UNITED TACONITE, LLC	Minor	8/25/2005	7/31/2010
MN0044946	United Taconite LLC - Thunderbird Mine			5/31/2004
MN0054089	CLIFFS ERIE, LLC-HOYT LAKES (combining 2 permits)	Minor	5/4/2001	11/30/2005
MN0069078	MESABI MINING/STEEL DYNAMICS	Minor	11/30/2007	6/30/2010
NEW	ESSAR EXPANSION	TBD		
NEW	TWIN METALS	TBD		
NEW	TECK	TBD		
MN0070378	Magnetation LLC - Plant 4 MODIFICATION		5/22/2013	4/30/2018
MN0070050	Mining Resources LLC MODIFICATION		8/01/2014 (mod)	10/31/2016
	TOP PRIORITIES ARE ABOVE THIS LINE			
MN0044946	EVELETH MINES LLC DBA EVTAC	Minor	6/30/1999	5/31/2004
MN0055964	ISPAT INLAND MINING CO-MINORCA	Minor	9/29/2000	7/31/2005
MN0042536	CLEVELAND CLIFFS LLC	Minor	5/4/2001	11/30/2005
MN0060151	DNR Soudan State Park			9/30/2008
MN0059633	ArcelorMittal Minorca Mine Inc. - Laurentian			12/31/2011
MN0069221	Magnetation Plant 1 & Mesabi Chief Tailings Basins			6/30/2013
MN0069400	Northshore Mining Co - Silver Bay Dredge Disposal			2/28/2014
MN0069868	Magnetation Plant 2			9/30/2015

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
MN0020249	Midland Research Center			7/31/2016
MN0055948	Keewatin Taconite Operations - Tailings			10/31/2016
MN0031879	US Steel Corp – Keetac			10/31/2016
MN0070050	Mining Resources LLC			10/31/2016
MN0068241	Essar Steel Minnesota LLC			9/30/2017
MN0070378	Magnetation LLC - Plant 4			NEW

EPA Comment:

Please explain which of these permits you are actually working on.

MPCA Response to EPA comment (Feb 2016):

Polymet environmental review, Minntac and Northshore Silver Bay are active work.

Additional information:

For more information on the Mining Permits Joint Priority, contact:

At MPCA: Jeff Stollenwerk, 218-302-6612, jeff.stollenwerk@state.mn.us

At EPA Region 5: Kevin Pierard, 312-886-4448, pierard.kevin@epa.gov

WQ Monitoring

October 1, 2012 – September 30, 2016 (FY 2013-2016)

FFY 2016 REPORT

Objective:

MPCA and EPA Region 5 will collaborate to enhance our monitoring and assessment efforts so that each agency will have sufficient data available to assess the condition of the states' and the Region's 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 the State and 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. It is critical to have appropriate waterbody classifications and standards to assess the data against to determine the state of water quality. Enhanced data management and reporting are also key to ensure the data collected is available to staff, partners, and stakeholders, and also to ensure 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 significantly increased appropriations 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 third 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.

Biennial allocations for these activities have persisted since the law's passage, and are assumed will continue for the FY14-15 biennium.

With this heightened level of effort comes a greater need for support and flexibility from EPA in conducting water monitoring and assessment activities in a manner that meets both state and federal expectations. The EPA approved the MPCA's updated "Minnesota's Water Quality Monitoring Strategy 2011-2021" in December 2012, which relies heavily on the Watershed Approach for its execution. Identifying monitoring and assessment as a joint priority for the next four years will provide continued focus and attention on collecting, analyzing, 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.

MPCA Monitoring and Assessment Priorities for FFY 2013-2016:

1. Operate Water Monitoring Networks/Approaches:

- Continue implementation of Intensive Watershed Monitoring 10-year cycle. Incorporate wetlands monitoring.

- Continue to operate Watershed Pollutant Load Monitoring Network and expand to subwatershed level.
- Continue participation in NARS.
- Continue to operate Citizen Lake and Stream Monitoring Programs.
- Continue to expand and monitor the Ambient Groundwater Monitoring Network.
- Participate in Mississippi River Monitoring Network Task Force and Water Quality Task Force of Upper Mississippi River Basin Association.
- Continue to identify and prioritize monitoring gaps that need to be filled, and identify additional resources that would be needed to fill them.

FFY 2013 Report:

- Implementation of the Intensive Watershed Monitoring 10-year cycle is on track. Through FFY13, monitoring has been performed in 60% of the state's watersheds. Wetland assessments using a combination of desktop evaluations and extrapolations from random wetland survey data were included in the watershed reports for the Twin Cities, Granite Falls, and Crow Wing watersheds in 2013. Watershed monitoring and assessment reports were completed and web posted for an additional seven major watersheds in FFY2013.
- Operation of the Watershed Pollutant Load Monitoring Network and expansion of the network to the subwatershed level are proceeding well. Twenty installations of subwatershed gages were completed in 2013, bringing the tally to 83 of the 124 to be installed by the end of 2015, on pace to meet that goal. A webpage with data output maps for watershed loads, flow weighted mean concentrations, and yields went live this year:
<http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/streams-and-rivers/watershed-pollutant-load-monitoring-network.html#products-data>
- No NARS fieldwork was performed in 2013. The report "Pharmaceuticals and Endocrine Active Chemicals in Minnesota Lakes" was released this year.
- Citizen Monitoring programs continue to operate and produce a large amount of data.
- The MPCA continues to expand the Surficial Groundwater Ambient Monitoring Network to identify and track water quality trends in vulnerable aquifers and determine how quality varies with land use. By the end of 2014, the network will include 265 monitoring wells that will provide the necessary information to evaluate and refine groundwater management decisions. As of August 2013, the network includes 210 wells. Each year the existing well network is sampled for over 100 chemicals, including nitrate, phosphorus, sulfate, chloride, trace metals such as arsenic and manganese, and a suite of 68 volatile organic compounds (VOCs). In 2013, the network also was sampled to determine perfluorochemical (PFC) concentrations. Each year about 20% of the network (40 wells per year) is sampled for a suite of over 100 contaminants of new or emerging concern (CECs) to better understand presence and extent of these chemicals and inform future monitoring and management efforts. The groundwater information is available to the public via the agency's web-based Environmental Data Access system, is interpreted in agency reports, including the August 2013 "The Condition of Minnesota's Groundwater 2007-2011" report (<http://www.pca.state.mn.us/index.php/view-document.html?qid=19743>), and several watershed assessment reports accessible at: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/watersheds/watershed-overview-map.html>.
- Continued providing information on our monitoring networks to the Mississippi River Monitoring Network Task Force and participation in the UMRBA Water Quality Task Force and

Executive Committee. An interstate monitoring plan design was selected by the WQ Task Force and approved by the Executive Committee that includes a tributary network connection to the Mississippi River Monitoring Network Task Force's work.

FFY 2014 Report:

- Implementation of the Intensive Watershed Monitoring 10-year cycle is on track. Through FFY14, monitoring has been performed in 72% of the state's watersheds. Watershed monitoring and assessment reports were completed and web posted for an additional 11 major watersheds in FFY2014, including wetlands components.
- Expansion of the Watershed Pollutant Load Monitoring Network to the subwatershed level is proceeding well, on track for all gages to be installed by the end of calendar 2015.
- The report, "The Condition of Rivers and Streams in Minnesota, based on Probabilistic Surveys, 1995-2011" was completed and web posted in April 2014 at: <http://www.pca.state.mn.us/index.php/view-document.html?qid=21234>. NRSA recon began at the end of FFY14. Recon included grab sampling for CECs.
- Citizen Monitoring programs continue to operate and produce a large amount of data, including statistically valid trend assessments on lakes (and some streams) across Minnesota.
- The MPCA continues to expand the Surficial Groundwater Ambient Monitoring Network to identify and track water quality trends in vulnerable aquifers and determine how quality varies with land use. By the end of 2014, the network will include 270 monitoring wells that will provide the necessary information to evaluate and refine groundwater management decisions. Each year the existing well network is sampled for over 100 chemicals, including nitrate, phosphorus, sulfate, chloride, trace metals such as arsenic and manganese, and a suite of 68 volatile organic compounds (VOCs). Each year about 20% of the network (40 wells per year) is sampled for a suite of over 100 contaminants of new or emerging concern (CECs) to better understand presence and extent of these chemicals and inform future monitoring and management efforts. The results of this effort from 2009 – 2012 are available in a report developed jointly by USGS and MPCA at <http://pubs.usgs.gov/sir/2014/5096/pdf/sir2014-5096.pdf>. Ambient groundwater data are available to the public via the agency's web-based Environmental Data Access system.
- Minnesota has taken a lead with Wisconsin in developing a monitoring Pilot of the UMRBA monitoring strategy for the river from St. Anthony Falls to the Iowa border, slated for calendar 2016. The MPCA is also participating in the workgroup developing a companion assessment methodology.

FFY 2015 Report:

- Intensive watershed monitoring remained on track. Through FFY15, monitoring has been performed in 85% of the state's watersheds. Watershed monitoring and assessment reports scheduled to be completed in FFY15 were not finished due to delays in the development of IT applications for producing waterbody assessments. These seven reports will be completed and web posted by mid-FFY16. Reports scheduled for FFY16 will be completed on time. A review conducted by the Midwest Biodiversity Institute (MBI) determined that MPCA's bio-assessment program is attaining a Level 4 following guidelines outlined in EPA's 2013 document "Biological Assessment Program Review: Assessing Level of Technical Rigor to Support Water Quality Management."

EPA Comment:

Region 5 is not aware of the program review and Level 4 designation by EPA. If this was accomplished through the review process conducted by MBI, we recommend language such as, "A review conducted by the MBI determined that MPCA's bio-assessment program is attaining a Level 4 following guidelines outlined in EPA's 2013 document "Biological Assessment Program Review: Assessing Level of Technical Rigor to Support Water Quality Management." --Change made above as EPA recommended.

- Expansion of the Watershed Pollutant Load Monitoring Network to the subwatershed level was completed, on schedule. Water quality trends will be developed in FFY16 for a subset of the sites in the network that have a sufficient period of record.
- Monitoring for the National Rivers and Streams Assessment was performed. Three new reports from the National Lakes Assessment were web posted at <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/lakes/national-lakes-assessment-project-nlap.html>.

MPCA has continued to participate and provide technical expertise for the NARS steering committees.

EPA Comment:

When discussing NARS work, MPCA could state that "MPCA has continued to participate and provide technical expertise for the NARS steering committees." --- EPA's suggested text added above. The MPCA could also include similar language in PPG report discussions on NARS.

- Citizen Monitoring programs continue to operate and produce a large amount of data, including statistically valid trend assessments on lakes (and some streams) across Minnesota.
- The MPCA's built out of the Surficial Groundwater Ambient Monitoring Network continues. As of October 2015, the network includes more than 240 wells to identify and track water quality trends in vulnerable aquifers and determine how quality varies with land use. Over the next several years, the network will expand to 268 monitoring wells that will provide the necessary information to evaluate and refine groundwater management decisions. Annual sampling of the network continues for over 100 chemicals, including nitrate, phosphorus, sulfate, chloride, trace metals such as arsenic and manganese, and a suite of 68 VOCs. Each year 40 wells are sampled for a suite of over 100 contaminants of new or emerging concern (CECs) to better understand presence and extent of these chemicals and inform future monitoring and management efforts.
- Minnesota and Wisconsin continued to plan a monitoring pilot for calendar 2016 of the UMRBA monitoring strategy for the Mississippi River from St. Anthony Falls to the Iowa border. The MPCA continues participating in the workgroup developing a companion assessment methodology.

FFY 2016 Report:

- Intensive watershed monitoring remains on track. Through FFY16, monitoring has been performed in 93% of the state's watersheds. Very high stream and river flows due to rain made fish sampling for ambient condition very difficult. Though the vast majority of fish sampling was accomplished, it was suspended on some sites. They will be monitored next year. Since water quality sampling is conducted over two summers before assessment occurs, the delay of biological monitoring for these sites will not delay assessment. Watershed monitoring and assessment reports scheduled to be completed in FFY15 were not finished last year due to delays in the development of IT applications that produce assessment results and portray those results in tables and maps. These seven reports have now been completed and are being

formatted in preparation to being posted to our watershed web pages. Reports scheduled for FFY16 are in development, but they are behind schedule. We anticipate they will be completed by the end of the 2016 calendar year.

- We have completed the fourth year of monitoring large rivers for water quality and biology. This work is akin to the intensive watershed monitoring in design, but is focused on the large rivers in Minnesota: Upper Mississippi River (from headwaters to the Twin Cities), the Minnesota River, the Red River, the Rainy River, the Lower Mississippi River (Twin Cities to Iowa border), and the St. Croix River. In past years, we sampled the Minnesota, Red, and Upper Mississippi Rivers. This year, sampling was conducted on the Rainy River.
- Minnesota and Wisconsin completed the planned monitoring pilot for the Lower Mississippi River this past summer/fall. The MPCA continues participating in the UMRBA workgroup to develop an assessment methodology for the data collected.
- Approximately 60 long-term biological monitoring stations were established at least-impacted reference sites around the state, to help understand wide scale changes in river and stream condition from ubiquitous stressors like climate change. All of the sites are sampled every two years (approximately ½ of the sites are sampled in any given year) for biology, habitat, flow and water chemistry.
- Monitoring the Watershed Pollutant Load Monitoring Network continues on the whole network of 199 major watershed and subwatershed load sites. We have draft water quality trends for a subset of the sites in the network that have a sufficient period of record. A report of these trends is in development.
- MPCA has continued to participate and provide technical expertise for the NARS steering committees, most notably in the past year the upcoming National Lake Assessment survey. MPCA has applied for, and received, the funds for the basic survey, as well as additional funds that will allow us to intensify our effort to sample 150 lakes across the state. Analyses will include basic water chemistry and a number of additional parameters that are part of the survey design. Algal toxins (microcystin and anatoxin-a), phytoplankton identification and enumeration, glyphosate monitoring, and zooplankton identification and enumeration will occur on all lakes. Additional work, such as shoreline habitat, and sampling and analyses for pesticides and a panel of contaminants of emerging concern will be supported using state funding.
- MPCA completed the National Wetland Assessment survey monitoring this past summer, and submitted a grant amendment to shift funding for certain activities. Work has begun to determine field logistics needed to support the wetland depression monitoring to be conducted in 2017 that will expand on the national survey.
- Citizen Monitoring programs continue to operate and produce a large amount of data, including statistically valid trend assessments on lakes (and some streams) across Minnesota.
- The MPCA continues to operate its Ambient Groundwater Monitoring Network. The network includes 266 wells to identify and track water quality trends in vulnerable aquifers and determine how quality varies with land use. These data are critical for providing a basis on which to evaluate and refine groundwater management decisions.

2. Develop and use tools for lake and stream biological monitoring and for waterbody assessment:

- Begin implementing.
- Continue to develop Lake IBIs and aquatic life monitoring and assessment protocols for lakes.
- Establish a Tiered Aquatic Life Use (TALU) waterbody classification system.
- Continue to implement and continuously improve the state's comprehensive assessment

approach, to identify impaired and unimpaired waters, to add waters that are newly determined to be impaired to the impaired waters list, and to delist waters that are no longer impaired.

FFY 2013 Report:

- Large River Intensive Monitoring began on the Upper Mississippi River from its headwaters to St. Anthony Falls in Minneapolis. A two-year monitoring approach per river, year one was successfully completed.
- Lake IBI fieldwork piloting began toward the end of FFY13. The DNR will be reporting on results and development progress to MPCA in mid-FFY14.
- The development of TALU is ongoing. Efforts over the last year have been focused on developing a framework for implementing TALU into MPCA's existing water quality assessments, stressor identification, impaired waters listings, permitting, and other water quality management work. As part of the 2014 water quality assessment work MPCA staff will be conducting a pilot of the proposed TALU system. A draft of the proposed TALU system is anticipated to be sent to EPA for preliminary review in February 2014.
- The MPCA continues to implement the watershed approach to assessments incorporating biological monitoring results. As of September 2013, all of the 2013 assessments have been completed, with the exception of assessments for waters used for production of wild rice. Development and refinement of the assessment method for the existing 10 mg/L sulfate standards for wild rice production waters is ongoing. MPCA anticipates submittal of the draft 2014 impaired waters list to EPA by the April 2014 deadline.

FFY 2014 Report:

- Large River Intensive Monitoring was completed on the Upper Mississippi River from its headwaters to St. Anthony Falls in Minneapolis. The data is being analyzed and the river will be assessed in mid-FFY2015. Large River Intensive Monitoring was initiated on the Minnesota River. Site selection and recon for the Red River got underway, with sampling scheduled to occur in calendar 2015.
- Approximately 60 long term biological monitoring stations are being established at least-impacted reference sites around the state, to help understand wide scale changes in river and stream condition from ubiquitous stressors like climate change. All of the sites are sampled every two years (approximately ½ of the sites are sampled in any given year) for biology, habitat, flow and water chemistry. Site establishment and sampling will continue in FFY2015.
- Lake IBI development and piloting continued jointly by the MPCA and the DNR. Assessments using Lake IBIs will begin in FFY15.
- The development of TALU is still ongoing. Efforts over the last year have been focused finalizing draft rule language, supporting documents as well, and the framework for implementing TALU into MPCA's existing water quality assessments, stressor identification, impaired waters listings, permitting, and other water quality management work. In parallel to the 2014 water quality assessments MPCA staff plan to pilot the proposed TALU system. MPCA continues to keep EPA Region 5 apprised of the development and schedule of TALU. The current estimate is that TALU will be adopted into rule in January 2016.
- The draft 2014 impaired waters list was submitted to EPA in spring of calendar 2014. The 2014 assessments were delayed due to work on the assessments IT infrastructure – 2014 and 2015 assessments will be completed in FFY2015.

EPA Comments:

The 303(d)/305(b) package MPCA submitted to EPA in April 2014 was complete except that it lacked an assessment of wild rice waters for possible sulfate impairment. EPA and MPCA are discussing how to address these remaining waters.

FFY 2015 Report:

- Large River Intensive Monitoring was completed on the Minnesota River. The data is being analyzed and the river will be assessed in FFY2016. Large River Intensive Monitoring was initiated on the Red River, and will be completed in FFY16. Site selection and recon for the Rainy River got underway, with sampling to occur in calendar 2016. The Upper Mississippi River monitoring and assessment report will be out in FFY16.
- Approximately 60 long term biological monitoring stations were established at least-impacted reference sites around the state, to help understand wide scale changes in river and stream condition from ubiquitous stressors like climate change. All of the sites are sampled every two years (approximately ½ of the sites are sampled in any given year) for biology, habitat, flow and water chemistry.
- Lake IBI development and piloting continued jointly by the MPCA and the DNR. Assessments using Lake IBIs were produced and will be included in watershed monitoring and assessment reports in FFY16.
- TALU development continues. The draft rule language is essentially complete along with the supporting documents. The schedule for TALU adoption and formal implementation has been pushed back more than once because of a combination of lack of legal and rulemaking resources and most recently because of the need to conduct additional stakeholder outreach. The political climate for new and revised water quality standards in Minnesota is extremely difficult. The MPCA remains committed to TALU adoption but recognizes that the schedule is somewhat dependent on external forces beyond our control. In the meantime, the MPCA continues to pilot the draft TALU framework for water quality assessments and is working closely with MPCA staff responsible for stressor identification, impaired waters listings, and permitting, and other water quality management work. MPCA will keep EPA Region 5 apprised of the development and schedule of TALU.
- The draft 2014 impaired waters list was submitted to EPA in April 2014. The 2014 assessments were delayed due to work on the assessments IT infrastructure – 2014 and 2015 assessments will be completed in FFY2015. As noted in EPA's above comments the draft 2014 list did not include wild rice waters. On June 30, 2015, MPCA sent an email to EPA requesting that they consider the April 2014 draft list complete in lights of 2015 Minnesota Session Law that prohibits the MPCA from listing waters as impaired under Section 303(d) of the Clean Water Act.

FFY 2016 Report:

- Lake water quality and biological is being jointly sampled by MPCA and the MNDNR. Together, we conduct aquatic life use assessments for the sampled lakes. The lake IBI tool used to assess data can only be applied to data from certain lake classes – it does not represent lakes in the northeast part of the state, those that experience winterkill or those greater than 10,000 acres in size. Even so, the lake IBI tool is suitable to assess biological data for a large portion of Minnesota lakes. Approximately 140 lakes have been assessed to date, most of which show aquatic life support. Eight lake aquatic life impairments were identified during the 2015 assessments and are included on the 2016 draft impaired waters list. Eighteen more lake biological impairments were identified during the 2016 assessment and will be included on the 2018 draft impaired waters list. More lake aquatic life assessments will be conducted in

2017. The assessment decisions are being included in our watershed monitoring and assessment reports. Once assessment has been conducted, MNDNR staff conducts stressor identification using EPA's CADDIS methodology for those lakes not supporting aquatic life uses. The information is shared with MPCA stressor identification staff for inclusion in the report and ultimately the Watershed Restoration and Protection Strategy documents document.

- TALU development continues. The technical work and rule documents that support the Tiered Aquatic Life Uses framework are completed. The documentation for the rule, including technical support documents and draft rule language, is available at the TALU framework website (<https://www.pca.state.mn.us/talu>). The rule is currently working its way through Minnesota's administrative process and a 45-day comment period is expected to start in November or December. At the start of the comment period, the Statement of Need and Reasonableness (SONAR) will be made available. Final adoption of the TALU framework is expected in Winter/Spring 2017. In the meantime, the MPCA continues to pilot the draft TALU framework for water quality assessments and is working closely with MPCA staff responsible for stressor identification, impaired waters listings, and permitting, and other water quality management work. MPCA will keep EPA Region 5 apprised of the development and schedule of TALU.
- The draft 2016 impaired waters list was open for public comment August 1 – September 30, 2016. The list is expected to be submitted to EPA by the end of 2016. It will not include wild rice waters. The submittal of the draft 2016 impaired waters list to EPA has been delayed due to continued work on the assessments IT infrastructure. The draft list reflects only two restored waters. 2016 is the first year in which impairments are listed based on Minnesota's new TSS and river nutrient standards. We had over 500 new impairments, over half for biology (fish and macroinvertebrates).

3. Enhance data management and access to water quality monitoring data:

- Continue use and expansion of EQuIS database for surface and groundwater data
- Address need to upgrade Hydstra time-series database
- Continue to make progress on Watershed Data Integration Project to bring multiple PCA databases' data together and make it readily accessible
- Begin Interagency Data Portal development to bring together data from state water agencies

FFY 2013 Report:

- In spring of 2013, MPCA's EQuIS Database exceeded the storage milestone of 10 million results. The database is growing quickly and MPCA foresees the database exceeding 15 million results within the 2013 calendar year. In FY13 MPCA purchased an "unlimited license" for the field data collection software called EQuIS Data Gathering Engine (EDGE). It allows for all MPCA field staff, local units of government, contractors, and partners of the MPCA to use the software in order to submit EQuIS bound field data to the MPCA. During FY13 EDGE software was used by groundwater staff and piloted by surface water staff – evaluation of performance is proceeding. MPCA's EQuIS Team is working to create a pilot project to test EDGE with external partners in FY14. A pilot project was completed with four laboratories to develop the electronic data deliverable (EDD) for lab data. The pilot was completed in September of 2013. MPCA worked to create a state standard chain of custody for labs to use with EQuIS bound data, and additional on-site EQuIS training was offered to surface water staff provided by the EQuIS creator and contractor EarthSoft. Lastly, MPCA renewed its annual contract with Minnesota Department of Agriculture so that their groundwater data may also be stored within EQuIS.
- After a two-year process failed to find a suitable upgrade to our current time series database, we are continuing forward with our current system built on top of Hydstra. Advances in off-the-

shelf systems will continue to be monitored and this effort will be revisited if a suitable candidate is available.

- The MPCA continues to make progress on the watershed data integration project to bring multiple databases' data together and make raw data and assessment data readily accessible. A new website application data search tool with both a text-based and map-based search function was implemented in FFY2013 at: <http://cf.pca.state.mn.us/water/watershedweb/wdip/index.cfm>. As of September 2013, the project has made progress to consolidate disparate but related databases including the Assessment Database (ADB), Pre-Assessment Database (PAD), and Bio Databases for streams and wetlands, into an integrated, non-redundant architecture. Ongoing work includes defining the requirements and technical approach for eliminating duplicative entry and maintenance of data pertaining to: exceedances of water quality standards; assessment team decisions; the Inventory of Impaired Waters; and the 303(d) list of TMDLs required. The system is being designed such that it will be able to incorporate TALU in the future. The goal is to have a new system available for use for the 2014 assessment work that will begin in earnest during the winter months of 2014.
- The state legislature made an appropriation in late FFY13 from the Clean Water Fund to initiate the development of an interagency water data portal. An interagency subteam began development of an IT project charter, and development of an interim "key water information catalogue" product to provide a webpage of web links to the most-frequented current water data and information webpages.

FFY 2014 Report:

- EQUIS Enterprise Version 6 was purchased and is now being used. The DNR is evaluating the use of EQUIS for county atlas groundwater data.
- MPCA and DNR are continuing to utilize the Hydstra time-series database while expanding its application beyond primarily streamflow data to continuous water quality collected on rivers and streams, and continuous water level and temperature data collected for groundwater.
- The MPCA is nearing completion of the development of the Watershed Assessment Integration System (WALIS) with support from State of Minnesota Information Technology Services. The 2014 and 2015 assessments will be done using the new WALIS, which will be available by the end of calendar 2014. Current process documentation and requirements gathering for replacement of the current biodatabase got underway, in advance of development work beginning in mid-calendar 2015.
- The Key Water Information Catalog went live on the web at <http://es.metc.state.mn.us/KeyWaterList/>. Current status documents for the water data infrastructure of six state agencies were completed. An end user needs analysis was initiated, to be completed in mid-calendar 2015.

FFY 2015 Report:

- DNR is beginning to use EQUIS for housing their county atlas groundwater data. Previously this was housed in a staff person's Access database.
- Work continues on the development of the Watershed Assessment Integration System (WALIS). As of November 2015, the WALIS has been used to complete the majority of the 2014 and 2015 assessments. The project has been delayed because of IT staffing issues and as a result, some of the assessments for the 2016 draft impaired waters list will be done "off-line." MPCA will keep EPA apprised of the development of the WALIS system.

- The interagency water data portal assessment project was completed. The conclusion reached was that the development of such a portal is not worth the cost. Rather, agencies will continue to incrementally integrate data systems as appropriate. The project did spawn a short-term project to establish procedures for developing common data standards across agencies, which will be completed in FFY16.

FFY 2016 Report:

- In regards to our EQulS data management system, the past year has been largely spent entering water quality data coming from our intensive watershed monitoring networks. One of our data management experts retired this past year and we have not been able to fill this vacancy. While we are struggling to manage the timely entry of data into this system, we have found some available help to prepare for the 2017 assessment process.
- Work continues on the development of the Watershed Assessment and Listing Integration System (WALIS). We are currently fixing problems with the system that were identified during the last round of assessments this past winter and in attempting to create the 2016 draft impaired waters list. The system fixes and development of other functionality needed to run 2017 assessments is on schedule to be moved into production by January 2017. A report of the 2016 assessment process is included in #2 above.
- The management of time series data using Hydstra is going well. Some investigation has been made in the past year to find a replacement for Hydstra, but we have not found a suitable alternative yet. Currently, we are evaluating WISKI, which was developed and is supported by the same company that created Hydstra.

Additional information:

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

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Water Sector Homeland Security

October 1, 2012 – September 30, 2016 (FFY 2013-2016)

FFY 2016 REPORT

Objective:

Increase the security and resiliency of wastewater treatment plants (WWTP's) against all hazards.

Statement of Problem/Issue:

Wastewater treatment plants are part of the nation's critical infrastructure, and their ability to function is essential to public health and environmental protection, the economic viability of communities, and the general welfare. It is important for wastewater utilities to be secured as well as possible against all hazards (natural and man-made) and to be as resilient as possible when adverse events affect them.

Actions to be accomplished:

1. MPCA and EPA will support and assist the Minnesota Water and Wastewater Agency Response Network (MnWARN) in order for them to prepare for mutual assistance during natural and man-made disasters. MPCA will report annually the number of WWTP's that are signatory members of MnWARN.
2. MPCA will collaborate with EPA and MDH on developing revisions to the state pandemic flu plan, to help ensure that WWTP critical staff and operations are appropriately identified and prioritized in the state plan.
3. MPCA will develop an on-line mechanism to disseminate security related information and bulletins to WWTP's.

FFY 2013 Report:

1. The MPCA has continued to work with the cities and MnWARN with the goal of getting all cities to become members. Currently, 326 cities are members of MnWARN.
2. The MPCA is currently updating existing information in the Agency's COOP, PANflu appendix and plans to integrate new guidance into the MPCA, Emergency Operations Plan (EOP). Additionally, the MPCA has been communicating the need for Communities to start planning for this type of event via the quarterly wastewater newsletter and the annual training event.
3. The MPCA has developed a quarterly wastewater newsletter, which is e-mailed to all permittees. This newsletter has a section that updates the permittees on security related information. If the timing of new information is critical, an email distribution list has been developed and could be used.

FFY 2014 Report:

1. The MPCA has continued to work with the cities and MnWARN with the goal of getting all cities to become members. The June rain events in Minnesota were a positive testimony to how well MnWARN, Minnesota Department of Health, MPCA, and Minnesota Rural Water Association worked jointly to assure that cities had the assistance and equipment they needed. Currently, 359 cities are members of MnWARN.
2. MPCA continues to prepare for a PAN Flu response and other types of human disease incidents. Preparedness actions completed include:

- Communication to municipalities the value obtained in planning for PAN Flu incidents via quarterly newsletters and training events.
- Completed PAN Flu guidance and integrated into the Agency's Emergency Operations Plan.
- Completed Human Disease Incident guidance and integrated into the Agency's Emergency Operations Plan.

MPCA Supplemental Note: MPCA management recognizes the need to assist Publically Owned Treatment Works (POTW) personnel during a Pandemic Flu (PanFlu) outbreak. Continued operation of wastewater treatment systems represents a top priority. The PanFlu, Job Action Sheet (JAS - attached) provides guidance to MPCA staff for assisting POTW personnel during an outbreak. Additionally, JAS contains information necessary for planning prior to an outbreak. Training continues throughout the state and processes for supplemental training are under review. The JAS is located in the MPCA - COOP, PanFlu Annex. It is our hope that identifying the need to assist POTWs, in the MPCA COOP, meets EPA's documentation requirements.

3. All four of the quarterly wastewater newsletters contained an article on responding to and/or the importance of preparedness in responding to emergencies.

FFY 2015 Report:

1. The MPCA has continued to work with the cities and MnWARN with the goal of getting all cities to become members. Currently, 367 cities are members of MnWARN.
2. Two of the quarterly wastewater newsletters contained an article on responding to and/or the importance of preparedness in responding to emergencies.
3. MPCA staff presented at 15 trainings/conferences about the need for emergency preparedness.

FFY 2016 Report:

1. The MPCA has continued to work with the cities and MnWARN with the goal of getting all cities to become members. Currently, 375 cities are members of MnWARN, the numbers continue to increase. As a result of three significant, rain/flooding events in Minnesota they were activated 15 times during 2016. MnWARN has been a very successful program for the State of Minnesota and has helped cities to reduce the time and amount of wastewater they have needed to release.
2. One of the quarterly wastewater newsletters contained an article on responding to and/or the importance of preparedness in responding to emergencies.
3. MPCA staff presented at 10 trainings/conferences about the need for emergency preparedness.

EPA Comment:

While the objective and statement of problem/issues talked about dealing with all hazards, natural and man-made, most of the following discussion is related for preparation pandemic flu, Other suggestions for actions to be accomplished could include for instance, providing guidance to WWTPs regarding inspecting for potential vulnerabilities, securing facilities to prevent unauthorized entry. Also, to be discussed, guidance to WWTP's for addressing natural disasters. In Minnesota these would most likely be flooding and serve winter storms. Protective measures to be encourage might be protective barriers, elevation of tanks and equipment back up, and keeping a supply of spare parts.

MPCA response:

Comments noted. Will discuss and determine what else we may want to do.

Additional information:

For more information on the Water Sector Homeland Security contact:

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