

2011 Storm Water Management Program (SWMP)

Michigan General Permit Number: MI0053856
Certificate of Coverage Number: MIG610379

Permittee: City of Ann Arbor

Mailing Address: 301 E. Huron Street, Ann Arbor, MI 48107

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Title: Water Quality Manager

Date: December 12, 2011

Signature of Authorized
Permittee Representative:



Jennifer Lawson
Water Quality Manager

Introduction

Federal regulations require that each community "with a municipal separate storm sewer system (MS4) serving a population between 100,000 and 250,000", have an NPDES Permit to discharge storm water to the waters of the United States. The Michigan Department of Environmental Quality (MDEQ) was delegated the responsibility of administering this regulation for the USEPA in the State of Michigan.

This document fulfills the City of Ann Arbor's (City) NPDES Phase I stormwater permit requirement for a Stormwater Management Program (SWMP). This SWMP has been designed and will be implemented to reduce, to the maximum extent practicable, the discharge of storm water pollutants to the surface waters in our community. The main sections of the SWMP coincide with the Program sections of the Permit:

- Public Education
- Public Involvement/Participation
- Illicit Discharge Elimination Program
- Post-Construction Stormwater Management
- Construction Stormwater Runoff Control
- Pollution Prevention/Good Housekeeping for Municipal Operations

This document includes activities to be implemented consistent with the Watershed Management Plans developed for the **Middle Huron Watershed** (Ann Arbor-Ypsilanti Metropolitan Area).

This SMWP document describes the complete management program, including:

- current pollution prevention compliance activities
- proposed pollution prevention compliance activities
- operation and maintenance compliance activities
- required public education activities by both the City and its partners

This SWMP combines with and relies on the implementation of watershed management activities performed by the City, our other watershed partner local governments, watershed councils and other agencies to protect and restore the surface waters in the Middle Huron and other watersheds. Further, the City recognizes that by working collectively with other watershed partners, illicit discharge elimination, public education and other water management activities can be implemented more effectively and cost-efficiently.

The SWMP tables are organized as follows:

- **Table 1** lists the WMP goals and objectives
- **Table 2** lists and describes the specific activities that the City or its watershed partners have undertaken, or will undertake, to implement our SMWP in the Middle Huron Watershed to comply with our Certificate of Coverage under the Michigan General Stormwater Permit.

In addition to the contents in this document and Table 2 that follow, this SMWP includes a number of relevant attachments. Each is referenced in this SWMP, but they are listed below for easy reference:

- Attachment A: Alternative Approach Plan for Addressing TMDLs (as approved by MDNRE (MDEQ) letter dated June 21, 2010)
- Attachment B: Public Education Plan (PEP)

Storm Water Management Plan Development

This SWMP has been designed and will be implemented to reduce the discharge of pollutants to the maximum extent practicable. It includes those actions expected to be implemented over the term of this permit, and includes:

1. Evaluation and implementation of site appropriate, cost-effective structural and nonstructural best management practices (BMPs) to minimize the water quality impacts from areas of new development and significant redevelopment, with the understanding that the goal is to protect the designated uses in the receiving waters from the effects commonly associated with urbanization.
2. Table 2 identifies the actions to be taken by the City and others in support of the Watershed Management Plan (WMP) goals and is consistent with the actions recommended within the WMP. In addition, Table 2 includes activities that address all SWMP content categories, which are described later in this document.

Assessment of Local Authority

The City has reviewed its charter, ordinances and other existing authority and has determined that it has the authorization to meet its commitments and implement the practices and programs specified in the SWMP.

Should the City determine at any time during the term of this permit that existing authority is inadequate to implement the requirements of this General Stormwater Permit, it will notify the Michigan Department of Environmental Quality (MDEQ). That notification will include those actions taken or proposed by the City to secure the legal authority of meeting the permit requirements or any appropriate explanation as to why such authority cannot be obtained.

Watershed Management Plan Goals

Table 1. Prioritized Goals and Objectives for the Middle Huron Watershed, and the Designated and Desired Uses They Address (Short Term = within five years; Long Term = Beyond five years)

| Long-Term Goal | Short-Term Objective | Uses Addressed |
|-----------------------------------|---|--|
| 1. Reduce flow variability | a. Adopt County and local stormwater management requirements that minimize flow fluctuations in receiving waterways, and associated bank erosion, channel widening and habitat destruction. | Designated Uses: Warm water fishery, Aquatic life and wildlife |
| | b. Encourage local ordinances, strategies and programs that: <ol style="list-style-type: none"> 1. Prevent unnecessary modification of the Huron River, its tributaries and adjacent riparian areas. | |
| | <ol style="list-style-type: none"> 2. Maintain and restore hydraulic function of floodplains and floodways by discouraging their alteration and encouraging restoration. | Desired Uses: Coordinated development; Hydrologic functions |
| | c. Promote local site planning review standards that favor utilization of stormwater as an on-site resource. | |
| | d. Monitor flow dynamics of the river and tributaries through established monitoring program. | |
| | Long-Term Objectives | |
| | e. Preserve natural infiltration and the recharge of groundwater, by protecting and restoring open spaces and natural recharge areas, installing infiltration BMPs, and reducing the amount of impervious area. | |
| | f. Meet TMDL goals for biota in Mallets Creek and Swift Run. | |

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| 2. Reduce nonpoint source loading and reduce soil erosion and sedimentation | Short-Term Objective | <p>Designated Uses: Warm water fishery; aquatic life and wildlife; partial and total body contact recreation; industrial water supply; public water supply</p> <p>Desired Uses: Coordinated development; hydrologic functions</p> |
| | a. Adopt County and local stormwater management requirements that minimize pollutant loading to receiving waterways by capturing and treating or infiltrating the smaller, more frequent storm event. | |
| | b. Encourage local ordinances, strategies and programs that: <ul style="list-style-type: none"> 1. Minimize the adverse effects of stormwater runoff from new highways, streets and parking lots. 2. Encourage the use of native landscapes and reduced dependence on chemical applications. | |
| | c. Promote local site planning review standards that foster a hierarchy to guide the selection of stormwater management approaches and favors source reduction. | |
| | d. Maintain stable oxygen levels in the hypolimnion of Ford and Belleville Lakes | |
| | e. Improve application and enforcement of soil erosion and sediment controls both during and after construction activity. | |
| | f. Identify and repair the most eroded and susceptible stream channels and banks. | |
| | g. Maintain water quality monitoring programs to measure progress toward TMDL goals. | |
| | h. Maintain baseline monitoring of sedimentation in the River and tributaries. | |
| | i. Increase education on BMPs among property owners and developers. | |
| | Long-Term Objectives | |
| | k. Meet TMDL goals for phosphorus concentration in Ford and Belleville Lakes | |
| | l. Meet TMDL goals for pathogens in Geddes Pond and Allen Creek | |
| m. Increase clarity in surface waters. | | |
| 3. Protect and mitigate loss of natural features for stormwater treatment and wildlife habitat | Short-Term Objectives | <p>Designated Uses: Warm water fishery; aquatic life and wildlife; industrial water supply; public water supply</p> <p>Desired Uses: All</p> |
| | a. Encourage local ordinances, strategies and programs that: <ul style="list-style-type: none"> 1. Preserve natural infiltration and the recharge of groundwater, by protecting and restoring open spaces and natural recharge areas, and reducing the amount of impervious area. 2. Promote buffering of waterways from the direct impacts of stormwater-related pollution. | |
| | b. Monitor water quality and biota to measure progress. | |
| | c. Educate local decision makers and the public about the benefits of critical habitat protection. | |
| | Long-Term Objectives | |
| | d. Meet TMDL goals for biota in Malletts Creek and Swift Run. | |

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| 4. Increase public awareness and involvement in protecting water resources | Short-Term Objectives | Designated Uses: all Desired Uses: all |
| | a. Conduct on-going programs to raise the public and practitioners' awareness of watershed management and nonpoint pollution issues and solutions. | |
| | b. Increase opportunities for public involvement in the protection of watershed resources. | |
| | Long-Term Objective | |
| 5. Gain broad implementation of watershed management plan and associated plans | Short-Term Objective | Designated Uses: all Desired Uses: all |
| | a. Promote intergovernmental coordination and cooperation in land use planning, natural resource protection, nonpoint source pollution control and stormwater management. | |
| | b. Establish financial and institutional arrangements for WMP fulfillment | |
| | c. Ensure the long-term viability of the Middle Huron Partnership Initiative. | |
| 6. Continue monitoring and data collection for water quality, water quantity and biological indicators | Short-Term Objectives | Designated Uses: all Desired Uses: all |
| | a. Maintain an adaptive monitoring strategy that yields data to measure progress toward achievement of WMP goals and objectives. | |
| | b. Develop a comprehensive database, using the best available and most appropriate technology, to serve the stormwater management, flood control and water quality planning and monitoring information needs of the watershed. | |
| | c. Track and report on short- and long-term maintenance of public and private stormwater conveyance and storage facilities. | |

Specific SWMP Content Requirements

The sections below detail the City's approach to each of the standard requirements under the **NPDES Permit (MI0053856)**.

1. Public Education Plan (PEP) (Part I.B.1)

The PEP section of our SWMP was developed to “promote, publicize, and facilitate watershed education” for the people of the City of Ann Arbor. This PEP combines with and relies on the implementation of public education activities by watershed partner communities and agencies.

The purpose of the PEP is to encourage the public within the City of Ann Arbor to reduce the discharge of pollutants in storm water to the maximum extent practicable. Pollution prevention is encouraged and a method for determining the effectiveness of the various public education activities is described.

The “Public” is defined to include all persons who potentially could affect the quality of stormwater discharges, including, but not limited to, residents, visitors to the area, businesses, commercial operations, and construction activities.

Topics for Public Education:

- a) Education of the public of hazards associated with *illicit discharges and improper disposal of waste. Encourage public reporting of the presence of illicit discharges or improper disposal of materials* into the permittee's separate stormwater drainage system.
- b) Education of the public on the availability, location and requirements of facilities for disposal or drop-off of *household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids.*
- c) Education of the public on *acceptable application and disposal of pesticides, herbicides and fertilizers*
- d) Education of the public regarding *preferred car cleaning agents and procedures for non-commercial car washing.*
- e) Education of the public regarding the *ultimate discharge point and potential impacts of pollutants* from the drainage system serving their places of residence.
- f) Education of the public regarding *proper septic system maintenance*
- g) Education of the public regarding *management of riparian lands to protect water quality.*
- h) Education of the public about their *responsibility and stewardship in their watershed.*
- i) Education on *pollutants unique to commercial, industrial and institutional entities as needed; including commercial food services entities regarding the prevention of grease discharges to storm drains.*

Public Education Plan activities and programs are included in **Attachment B**.

2. Public Involvement/Participation (Part I.B.2)

The City of Ann Arbor Stormwater management Program shall encourage public participation in all manners of stormwater activities. At a minimum, the program shall involve the public in review of the City's Stormwater programs. As a standard, the City seeks public involvement before most large municipal public works projects (i.e. bridges, roads, etc. that include a stormwater component).

Public Involvement/Participation activities and programs are included in **Table 2**.

3. Illicit Discharge Elimination Plan (IDEP) (Part I.B.3)

The IDEP section of our SWMP was developed to prohibit and effectively eliminate illicit discharges (including the discharge of sanitary wastewater) to the City's storm system. The IDEP is included as a section in **Table 2**.

"Illicit Connection" means a physical connection to the separate stormwater drainage system that 1) primarily conveys illicit discharges into the system and/or 2) is not authorized or permitted by the local authority (where a local authority requires such authorization or permit).

"Illicit Discharge" means any discharge (or seepage) to the separate storm water drainage system that is not composed entirely of storm water or uncontaminated groundwater. Examples of illicit discharges include dumping of motor vehicle fluids, household hazardous wastes, grass clippings, leaf litter, or animal wastes, or unauthorized discharges of sewage, industrial waste, restaurant wastes, or any other non-stormwater waste into a separate storm water drainage system.

- The City of Ann Arbor maintains a cleaning and inspection program for its stormwater system. When indications of illicit discharges are encountered, the situation is investigated following procedures.
- Dye testing of City-owned facilities is completed on a regular basis.

The IDEP section of **Table 2** identifies and describes the activities that will be carried out to address the IDEP elements as specified in Permit (MI0053856). Specifically the IDEP required elements are:

- a) A program to find, prioritize and eliminate illicit connections and minimize illicit discharges to the permitted drainage system from commercial, industrial, institutional, public and residential sources.
 - a. Including a strategy to conduct routine dry weather screening of enclosed storm drains
- b) A program to minimize infiltration of groundwater contaminated by seepage from sanitary sewers and on-site sewage disposal systems into the drainage system.
- c) The legal authority to prohibit discharges into the drainage system, including:
 - a. Regulating the contribution of pollutants to the drainage system;
 - b. Regulating the rate at which water flows into the drainage system;
 - c. Prohibiting illicit connections and illicit discharges including the direct dumping of materials other than stormwater into the drainage system;
 - d. Requiring compliance with ordinances, permits, contracts, etc.;
 - e. Conducting all inspection, surveillance and monitoring procedures necessary to determine compliance

4. Post-Construction Storm Water Control for New Developments and Redevelopment Projects (Part I.B.4)

As per Part I.B.4. of the Permit, the City has a process to implement and enforce a program to address post-construction stormwater runoff from new and redevelopment projects that discharge into the drainage systems and (1) disturb areas greater than or equal to 1 acres, or (2) disturb less than 1 acre but are part of a larger common plan of development or sale.

The City of Ann Arbor has a comprehensive Stormwater Master Plan that includes the **Middle Huron Watershed Management Plan** that provides mechanisms to protect the designated uses in all receiving waters from the effects

commonly associated with urbanization. Included also in this Master Plan are the City's ordinances and policies that provide requirements and standards addressing direct and indirect stormwater impacts.

The City of Ann Arbor continues to implement and enforce ordinances that address post construction storm water runoff from new development and redevelopment projects to the extent allowable under the Rules of the Washtenaw County Water Resources Commissioner (WCWRC).

This post-construction stormwater runoff control program is being implemented across the City's jurisdiction in the regulated area. The program is applicable to all development and redevelopment projects that disturb more than 1 acre (i.e., both public and private projects) and discharge to a surface water of the state, either directly or via a separate storm sewer system.

The post-construction stormwater runoff control program includes:

- Requirements for implementation of structural and nonstructural BMPs
- Requirements for long-term operation and maintenance of BMPS
- A process for review of post-construction storm water BMPs

Post-Construction Storm Water Control for New Developments and Redevelopment Projects activities and programs are included in **Table 2**.

5. Construction Storm Water Runoff Control (Part I.B.5)

The City of Ann Arbor is an authorized SESC Municipal Enforcing Agency. To control wet weather discharges from construction activities, the City has developed procedures to do the following:

- Provide notice when pollutants are discharged from construction activities and enter the MS4;
- Ensure that appropriate soil erosion and sedimentation controls are included on site plans; and,
- Include a procedure for receiving and considering public complaint of discharges from construction activities to the MS4.
- Chapter 63

Soil Erosion and Sedimentation Control activities and programs are included in **Table 2**.

6. Pollution Prevention and Good Housekeeping (Part I.B.6)

The permit requires the City to develop and implement a program of operations and maintenance BMPs for MS4 municipal operations, to prevent or reduce pollutant runoff from those municipal operations to the maximum extent practicable. These requirements include activities related to:

- Employee training to prevent and reduce storm water pollution through proper implementation of BMPs;
- Structural stormwater controls;
- Roadways
- Fleet Maintenance
- Storm Sewer Labeling
- Flood Control Projects
- Pesticides and Fertilizers

Pollution Prevention and Good Housekeeping activities and programs are included in **Table 2**.

The City's Water and Wastewater treatment plants both hold NPDES permits that include stormwater management requirements.

Program Assessment and Reporting

1. Annual Report and SWMP Submittal

- a. Contact Person: Jennifer Lawson, CSM; Water Quality Manager (734.794.6430 x43735)
- b. First Year Report: Due - October 1, 2011
 1. BMPs
 2. Measurable Goals
 3. Compliance Assessments
 4. Receiving Water Quality Status
 5. Receiving Water Quality Stresses
 6. Revised Fiscal Analysis
 7. Upcoming Activities
 8. Annual Budget
- c. Mid-Year Reports Due April 1, 2012 and annually thereafter
- d. Permitted Drainage System Operator Identification:
NOT APPLICABLE
- e. Subsequent Annual Reports: Due – October 1, 2012 and annually thereafter
 1. Compliance assessment
 2. Environmental Impacts
 3. Water Quality Assessment
 4. Data and Results
 5. Upcoming Activities
 6. BMP Changes
 7. Notice of Changes in Reliance on Permitted Drainage System Operators
 8. Drainage System Changes
 9. Revised Fiscal Analysis
 10. Annual Budget

2. Notification Requirements

- a. Any discharges to the City's storm water system will be reported to the State verbally and/or electronically within 24 hours of the City's knowledge, and follow-up documentation will be submitted within 10 days of the notification.
 - i. Discharges may include violations of any NPDES permit, Part 91 violations, Part 5 violations, Water Quality Standard violations, and/or Part 41.

3. Identification of Additional Point Source Discharges of Storm Water

- a. Any new discharge points determined over the reporting period will be reported within 14 days of the City's knowledge, as per permit requirements.
- b. Any new discharge pointes determined over the reporting period will be denoted on a map, submitted with the City's Annual Report.

4. Retention of Records

The City will retain the SMWP and its associated records (including monitoring data) for a minimum of three years after the termination of the permit. If available, these records shall include, but not be limited to:

- Information regarding the effectiveness of activities,
- Records of analyses performed,
- Calibration and maintenance of instrumentation (*when/if available and applicable*), and
- Recordings from continuous monitoring instrumentation (*when/if available/applicable*).

Watershed Plan and SWMP Revision

The SWMP will be reviewed (and revised as necessary) pursuant to our Certificate of Coverage. The WMP will be reviewed (and revised as necessary) with coordination from the MDEQ. In this permit transition period, it is imperative that the City work with its watershed partners.

- Revisions to date-specific activities listed in **Table 2** will be made, as necessary, with approval of MDEQ. Any revisions to the SWMP will be submitted at the time of progress reporting.

Table 2: Compliance Activities

| Public Education | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|------------------|--------------------|---|--|-------------------|----------|-----------------|
| | I.B.1.a | Encourage public reporting of the presence of illicit discharges or improper disposal of materials | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.b | HHW, travel trailer sanitary wastes, chemicals, yard wastes, & motor vehicle fluids | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.c | Acceptable application and disposal of pesticides, herbicides and fertilizers | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.d | Preferred car cleaning agents and procedures for non-commercial car washing | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.e | Ultimate discharge point and potential impacts of pollutants | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.f | Proper septic system maintenance | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.g | Management of riparian lands to protect water quality | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.h | Responsibility and stewardship in their watershed | See HRWC Regional Public Education Plan (Attachment B) | | | |
| | I.B.1.i | Pollutants unique to commercial, industrial and institutional entities as needed; including commercial food services entities regarding the prevention of grease discharges to storm drains | See HRWC Regional Public Education Plan (Attachment B) | | | |

| Public Involvement/ Participation | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|-----------------------------------|--------------------|---|--|--------------------|-------------------|---|
| | I.B.2.a. | Local public notice requirements | Continue to involve the public for municipal improvements through the planning process. Notices are posted on gov-delivery, on the City's website and posted in various print materials sent to all residents. | SW Program Manager | Ongoing | Documented involvement and publications |
| | I.B.2.b. | Coordination with local stream or watershed protection organization | Partnership with the Huron River Watershed council continues actively. The City is an active partner and supports HRWC programming. | SW Program Manager | Ongoing | Documented involvement and publications |
| | I.B.2.b. | Coordination with local stream or watershed protection organization | The City supports an Environmental Commission, that focuses on all aspects of the Natural Environment within the City. Continuous communication and programming is facilitated with this group. | SW Program Manager | Ongoing | Documented involvement and publications |
| | I.B.2.b. | Coordination with local stream or watershed protection organization | When the City revisits the SWMP for a revision or update based on permit changes, comments and coordination will be sought from local watershed entities, including, but not limited to: HRWC, SEMCOG, and local creekshed groups. | SW Program Manager | At time of update | Documented involvement and publications |

| IDEP | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|------|--------------------|--|--|---------------------------------|----------|--|
| | I.B.3.a. | A program to find and eliminate illicit connections and discharges | Storm Sewer System Map | SW Program Manager | Complete | Completed GIS mapping system with all discharge points, receiving waters, facilities, controls, etc. |
| | I.B.3.a. | A program to find and eliminate illicit connections and discharges | Develop Prioritized screening list | SW Program Manager | Complete | Priority list ranking illicit discharge potential from high to low; Inspection maps and schedule for field staff |
| | I.B.3.a. | A program to find and eliminate illicit connections and discharges | Dry Weather screening to maximize the detection of illicit discharges | SW Program Manager, Field staff | Ongoing | Inspections conducted at 40% of discharge points at high priority areas; Documentation of annual activities in dry weather screening (Field notes, pictures, sampling, etc.) |
| | I.B.3.a. | A program to find and eliminate illicit connections and discharges | Dry Weather screening to maximize the detection of illicit discharges | SW Program Manager, Field staff | Ongoing | Inspections conducted at all discharge points (minimum 20% a year) |
| | I.B.3.a. | A program to find and eliminate illicit connections and discharges | Develop SOP for responding to illicit discharges & reporting to MDNRE | SW Program Manager, Field staff | Complete | SOPs for illicit discharge response and reporting in use by staff |
| | I.B.3.b. | Minimize infiltration of groundwater contaminated by seepage from sanitary sewers and on-site disposal systems | OSDS: The City continues to work with the Washtenaw County Health Department to educate on OSDS Issues. I & I: The City televises all sanitary sewers on a regular basis. All known I & I: addressed on a case-by-case basis. | SW Program Manager, Field staff | Ongoing | Summary reports of all sanitary sewers that were found with I & I, map of areas with corrective measures taken. |

| ID | LC | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|----|----|--------------------|--|--|---|---------------------------|--|
| | | I.B.3.c. | Prohibit illicit discharges through regulation | Regulate contribution of pollutants & prevent dumping to MS4 | SW Program Manager, Field staff | Ongoing | Ordinance, authority, and policies already established. Enforcement ongoing. |
| | | I.B.3.c. | Prohibit illicit discharges through regulation | Establish the authority to investigate, inspect, and monitor suspected illicit discharges | SW Program Manager, Field staff | Complete | Ordinance, authority, and policies established. |
| | | I.B.3.c. | Prohibit illicit discharges through regulation | Require/enforce elimination of illicit discharges & connections into MS4 owned or operated by Permittee | SW Program Manager, Field staff | Ongoing | Ordinance, authority, and policies already established. Enforcement ongoing. |
| | | I.B.3.c. | Prohibit illicit discharges through regulation | Investigate complaints or situations as reported or discovered, including Spill Response and Emergencies | SW Program Manager, Field staff | Ongoing | Document all complaints and incidences through tracking system; Outcome of investigations. |
| | | I.B. 3. | IDEP - General | Provide IDEP training to all staff | SW Program Manager, Field staff | Ongoing | Provide basic training (presentation) to all staff, include field training to all field staff ; New staff to receive IDEP training within 6 months of hire date; In-house informal training is on-going. |
| | | I.B. 3. | IDEP - General | Environmental or Complaint Response - Customer Service call center, tracking system | SW Program Manager, Customer Service Center | Ongoing - Tracking System | # of calls received per year when system is implemented; Outcome of calls |

| Post Construction Stormwater Control | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|--------------------------------------|--------------------|---|--|--|----------|---|
| | I.B.4.a. | Implement & enforce a program to address storm water runoff from new development & re-development sites | Adopt Ordinance that sets water quality and channel protection standards, as agreed to in permit application - Requirements for implementation of structural and nonstructural BMPs | SW Program Manager | Complete | Council Resolution and Ordinance adopted. |
| | I.B.4.b.2. | Implement & enforce a program to address storm water runoff from new development & re-development sites | Requirements for long-term operation and maintenance of BMPS - Adopt Operation and Maintenance requirements for new PC controls | SW Program Manager, Site plan review team (PSA, CSA), Inspectors | Complete | Policy developed and implemented by all staff involved in site inspections. |
| | I.B.4.c. | Implement & enforce a program to address storm water runoff from new development & re-development sites | A process for review of post-construction storm water BMPs - Develop and implement checklist for site plan review and approval | SW Program Manager, Site plan review team (PSA, CSA), Inspectors | Complete | Checklist used for all site plan reviews to ensure plans are in compliance with standards. Plans cannot be approved without meeting the standards. |
| | I.B.4.c. | Implement & enforce a program to address storm water runoff from new development & re-development sites | Develop and implement an inspection policy to ensure PC controls are in place as approved in the site plan Develop and implement enforcement procedures if PC controls are not constructed as required or O&M is not conducted as required. | SW Program Manager, Site plan review team (PSA, CSA), Inspectors | Jan 2013 | Policy developed/implemented by all staff involved in program. Enforcement of non-compliant sites, including stop work orders & fines. SOPs for this process have been developed & implemented. |
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| Construction Stormwater Runoff Control | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal |
|--|--------------------|--|---|--|---------------------|--|
| | I.B.5.a | Provide notice when pollutants are discharged from construction activities and enter the MS4 | Conduct monthly inspections at all construction sites requiring site plan approval. Conduct a minimum of 2 inspections of all single family home construction sites Develop and implement SOP for reporting to the MDEQ. | SW Program Manager, SESC staff | Complete | SOP, Inspection forms, pictures, enforcement letters, & copies of notices to MDEQ |
| | I.B.5.b | Ensure that appropriate SESC are included on site plans | Develop and implement policy for site plan review and approval, and inspections, to meet Part 91 standards and local standards | Inspectors, Legal Department, SW Program Manager | Complete Ongoing | Checklist used for all site plan reviews to ensure plans are in compliance with standards. Plans cannot be approved without meeting the standards. |
| | I.B.5.b | Ensure that appropriate SESC are included on site plans | Develop and implement enforcement procedures if SESC controls are not constructed and maintained as required | Inspectors, SW Program Manager | Ongoing | Enforcement, including stop work orders and fines. Formal SOPs that reflect this process are developed and implemented |
| | I.B.5.c | Procedure for receiving & considering complaints | Procedure for tracking and following up on complaints | Inspectors, SW Program Manager | Ongoing | Complaint record (tracking system), inspection forms, pictures, etc |
| | | | | | | |

| P2/Good Housekeeping | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal/Outcome |
|----------------------|--------------------|----------------------------------|---|---------------------------------|--------------|--|
| | I.B.6. | Employee/ Contractor Training | Provide training sessions for employees | SW Program Manager | Ongoing | Training provided to all existing maintenance operation employees regarding SW program |
| | I.B.6. | Employee/ Contractor Training | Develop storm water training materials (fact sheets) for field staff | SW Program Manager, Field Staff | Complete | Fact sheet to be kept in trucks and given to all field staff to serve as reference when in field |
| | I.B.6. | Employee/ Contractor Training | Require contractors to comply with storm water BMPs outlined in City standards and specifications. | PMU | October 2011 | No. of contracts, with specific BMP requirements, signed by contractors. |
| | I.B.6. | Employee/ Contractor Training | Require contractors to designate a person in charge of storm water compliance for the project. | PMU, Inspectors | July 2012 | Designated storm water compliance manager, number of SESC violations |
| | I.B.6. | Employee/ Contractor Training | Provide educational materials to contractors in bid package, prior to conducting work for permittee | SW Program Manager, PMU | July 2012 | Number of SESC violations |
| | I.B.6.a. | Structural Controls | Develop the detailed list of municipal properties and structural controls at those properties. | SW Program Manager | Complete | List without map submitted |
| | I.B.6.a. | Structural Controls | Completed GIS mapping system with all facilities and controls mapped, with detailed database for O&M tracking | SW Program Manager, GIS staff | October 2011 | GIS map with all facilities indicated ; active database |

| NO | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal/Outcome |
|----|--------------------|---------------------|--|---|--------------|---|
| | I.B.6.a. | Structural Controls | Develop and implement a schedule for inspections, and O&M for all structural controls. | SW Program Manager, Field Staff, Facility Contact | October 2011 | Inspection /O&M schedule developed, added to the SWPPI and GIS Mapping System, and implemented |
| | I.B.6.a. | Structural Controls | New Facilities and SW Controls | SW Program Manager, Field Staff, Facility Contact | Ongoing | New controls meet standards. Facilities and controls added to GIS Mapping System within 3 months of construction |
| | I.B.6.a. | Structural Controls | Develop procedures for proper handling and disposal of waste from O&M of structural controls | SW Program Manager, Field Staff, Facility Contact | October 2011 | SOP completed and implemented |
| | I.B.6.b. | Roadways | Implement BMPs to reduce pollutant discharges | Facility Contact, Field Staff | Ongoing | Continue street sweeping, catch basin cleaning, and precision application of salt as previously implemented; Copy of schedule, amount of waste collected and disposed of properly, annual summary report of salt use. |
| | I.B.6.b. | Roadways | Proper salt and sand storage and management | Facility Contact | Ongoing | Copy of SWPPP inspection reports |
| | TMDL | Roadways | Reduce TSS runoff from paved surfaces to the maximum extent practicable (MEP) - Control dust & TSS from unpaved roads and parking lots | SW Program Manager; Street Maintenance Crews | October 2011 | Completed SOP for maintenance of unpaved roads |

| NO | Permit Requirement | Topic Requirement | Activity | Responsible Party | Timeline | Measurable Goal/Outcome |
|-----------|---------------------------|----------------------------|--|--------------------------------------|-----------------|---|
| | I.B.6.c. | Fleet Maintenance | SWPPP(s) developed and implemented (see attached list of facilities where applicable) | SW Program Manager, Facility Contact | Complete | Copy of SWPPP(s) & facilities inspection reports |
| | I.B.6.c. | Fleet Maintenance | Inspection, O&M Schedules for all permittee owned vehicles and equipment | SW Program Manager, Facility Contact | Complete | Copy of schedule, inspection reports |
| | I.B.6.c. | Fleet Maintenance | Investigate and implement BMPs for refuse management (if problems are found) | SW Program Manager, Facility Contact | Ongoing | Copy of summary report of investigation and implementation reports |
| | I.B.6.d. | Storm Sewer Labeling | Permanent identification for any newly installed outfall structure will be affixed upon construction | Storm maintenance Crews | Ongoing | GIS map with all new outfalls indicated & Photo documentation. |
| | I.B.6.e. | Flood Control Projects | City actively pursue opportunities when they arise – including property acquisition, demolition, floodplain enhancements and improvements. | SW Program Manager | Ongoing | Results of Flood control projects – mapped locations and outcome reports. |
| | I.B.6.f. | Pesticides and Fertilizers | Develop policy regarding soil testing & fertilizer use | Parks Operations Supervisor | Ongoing | Policy adopted |
| | I.B.6.f. | Pesticides and Fertilizers | Require all relevant staff and contractors to be certified pesticide/herbicide/fertilizer applicators | Parks Operations Supervisor | Ongoing | Documented - certified staff must complete training every 3 years or re-take certification exam |
| | I.B.6.f. | Pesticides and Fertilizers | Use only P free fertilizer on public property | Parks Operations Supervisor | Ongoing | City-wide ordinance prohibits phosphorous fertilizer unless soil sample indicated P addition is necessary |

Attachment A:

Alternative Approach Plan for Addressing TMDLs (as approved by MDNRE letter dated June 21, 2010)

Middle Huron Stormwater Plan for Addressing Total Maximum Daily Loads (TMDLs)

The following plan was developed by the Middle Huron Watershed Stormwater Advisory Group (SAG) – a collaboration between communities and agencies with a general stormwater Phase I or Phase II permit for the Middle Huron River in Washtenaw County. This plan serves as an alternative approach to steps prescribed under the Storm Water Pollution Prevention Plan (SWPPI) requirement of the Watershed General Permit (MIG610000) for addressing limits imposed by Total Maximum Daily Load (TMDL) documents. The SAG developed this alternative because its members have already made significant progress toward addressing the TMDLs in the Middle Huron, a monitoring plan has already been developed and implemented, and implementation plans already exist for two of the five TMDLs.

Participating Permittees

The permitted entities, who comprise the SAG, that are participating in this alternative approach to addressing TMDL requirements include the following:

- Washtenaw County Water Resources Commissioner
- Washtenaw County Road Commission
- City of Ann Arbor
- City of Ypsilanti
- Village of Dexter
- Charter Township of Pittsfield
- Charter Township of Ypsilanti
- Eastern Michigan University

It should be noted that, unlike the other participants, Pittsfield Township holds a jurisdictional permit. The Township is participating in this plan where appropriate, but they may also need to engage in additional activities to comply with jurisdictional permit requirements. Refer to the Pittsfield Township SWPPI for more details. Other entities may hold stormwater permits within the Washtenaw County portion of the Huron River Watershed, but they have not chosen to participate in this plan at this time.

Alternative Approach Coverage

This plan specifies methods and implementation activities that will be employed within TMDL contributing areas within the Middle Huron River Watershed (Middle Huron). In most cases the geographical extent of activities is included; if it is not, it should be assumed that the activity will apply across the entire TMDL area. The TMDLs addressed by this alternative plan include all those in the Middle Huron that are due to stormwater sources. That includes the TMDLs listed in Table 1 below.

Table 1: Waterbodies requiring TMDLs for Stormwater Related Impairments in the Middle Huron Watershed

(Source: MDEQ 2008 303(d) list of nonattaining waterbodies)

| Waterbody | Pollutant or Problem | TMDL Status | Location/Area |
|---|---|--------------------------------------|--|
| Ford Lake/ Belleville Lake | Nutrient enrichment (phosphorus) | Approved in 2000; To be updated 2010 | Impoundments of the Huron River located between the cities of Ypsilanti and Romulus. |
| Huron River (Geddes Pond and Allen Creek) | Pathogens (rule 100) | Approved in 2001 | Geddes Pond Dam upstream to Argo Dam, Ann Arbor |
| Malletts Creek | Poor fish and macroinvertebrate communities | Approved in 2004 | Huron River confluence u/s to Packard Rd. |
| Swift Run | Poor macroinvertebrate community | Approved in 2004 | SE Ann Arbor: Huron River confluence upstream to Ellsworth Rd |
| Honey Creek | Pathogens (rule 100) | Approved in 2009* | Confluence of Huron River upstream to Wagner Rd.. |

* The Honey Creek TMDL is not included in watershed partner COCs and is not covered by the TMDL Implementation grant.

General Approach

The SAG is taking the general approach that, in order to reduce the sources of TMDL pollutants, individual sources should be identified as specifically as possible through monitoring, then a set of well-targeted implementation activities should be developed to eliminate or reduce the pollutant contribution from each source. Thus, this plan is divided into two sections: a monitoring and source identification section and a pollutant reduction implementation plan section. The monitoring and source identification section describes the data collection and analysis strategy and methods that will be employed in detail. The implementation section describes the steps that will be taken to establish and prioritize implementation activities for each TMDL. For each, an existing plan will be updated or refined, or a new plan will be developed. In addition to these TMDL-specific plans, several watershed management plans have been developed for the middle Huron. The most recent of these, *The Watershed Management Plan for the Huron River in the Ann Arbor-Ypsilanti Metropolitan Area (Middle Huron)*, serves as an umbrella for all of these plans. That plan may be downloaded at <http://www.hrwc.org/publications/watershed-management-plans/>.

The Washtenaw County Water Resources Commissioner has been awarded a grant from DEQ to develop many of these elements for the SAG. The grant project work plan and schedule is included in Appendix E. The project will begin in February of 2010 and be completed by the end of September 2011.

Monitoring and Source Identification

The Middle Huron has a monitoring program that was established in 2002, primarily to gain an understanding of nutrient dynamics from tributaries to the Huron River and Ford and Belleville Lakes

downstream. A monitoring plan was developed to establish baseline measures and track progress toward achieving the TMDL for phosphorus. The monitoring plan detailed in Table 2 was established for the Watershed Management Plan that includes monitoring for the TMDLs and other identified impairments. Monitoring sites included in this plan are shown in Figure 1.

The monitoring plan is based around four programs administered by three organizations. First, the Huron River Watershed Council's Adopt-A-Stream Program collects data on benthic macroinvertebrates three times a year, including a special collection of winter stoneflies. Adopt also does a complete stream habitat assessment of each site every 4-5 years, which includes a number of geomorphic characteristics along with general habitat characteristics, which is consistent with the MDEQ protocol. Adopt collectors also sample for water conductivity at each macroinvertebrate event. In addition, summer temperatures are documented every 5 years. The Adopt program uses volunteers to collect the vast majority of the data.

Secondly, MDEQ collects data through its rotational watershed assessments. MDEQ returns to the watershed every five years to collect benthic macroinvertebrates, habitat assessment data and, in some cases, a suite of water chemistry parameters. Site selection varies each year.

The Huron River Watershed Council (HRWC) also administers the Middle Huron Tributary Monitoring Program on behalf of the Middle Huron Partnership, a group formed in 1996 to address the nutrient TMDL for Ford and Belleville Lakes. HRWC uses volunteers and staff to collect water samples and deliver to the Ann Arbor Water Treatment Plant for analysis. Analytes include total phosphorus, nitrates, nitrites, total suspended solids and *E. coli*. Staff and volunteers also collect stream discharge data from all ten sites to allow for the calculation of pollutant loads. Currently, data is collected twice per month with additional storm event samples collected opportunistically during the April to September growing season.

Finally, MDEQ conducted water quality monitoring of six lake sites in Ford and Belleville Lakes and two sites on the Huron River. Nutrients and other parameters were collected once per month from April to September. This program was in effect through 2006 when it was halted due to funding cuts. These sites were also sampled in 2009, but it is unlikely that this monitoring will continue.

While this data collection is a good start, the monitoring plan must be updated with specifics that relate directly to stormwater related impairments – namely phosphorus and *E. coli*. Beginning in 2010, the Middle Huron SAG will analyze all of the existing data from these programs and, in addition, data from Illicit Discharge Elimination Programs (IDEP) to identify “hot spots” for TMDL pollutants. A plan will help the SAG gain a better understanding of watershed conditions, pollutants, sources, and causes – especially those related to 303(d) listed impairments. A desktop analysis will be performed to evaluate the frequency and type of monitoring needed to characterize critical drainages. Initial monitoring of potential “hot spots” may lead the investigators to conclude that some areas are not impairing the system as originally thought. For example, some tributaries to the Huron have recently been found to be meeting TMDL phosphorus concentration limits. Further monitoring is needed to determine overall loading from critical areas at various flow levels during dry weather and across storm events.

This information will help to better characterize the sources and dynamics of phosphorus loading into the system. For example, does the majority of phosphorus loading come from channel cutting and other erosive processes, or from stormwater runoff? If from stormwater runoff, then is most of the loading from near sources or is it accumulated across the drainage? Is *E. coli* coming directly from storm pipes

or from the upstream watershed during storms? Answers to these and other questions will help to refine management targets. The monitoring plan will be updated with these questions in mind (and in consultation with SAG and MDEQ), and will comprehensively examine the system of discharge points to determine the critical pollutant loading areas.

Sampling will consist of grab samples collected in conjunction with discharge measurements or estimates (from gage rating curves) taken twice per month, May through September at the ten sites listed as "HRWC" in Figure 1. In addition, investigative sampling will be conducted upstream of sites that exhibit the highest concentrations or loads. Upstream sites will be selected strategically to segment drainages and isolate areas with different potential sources. Storm samples will be collected opportunistically from hot spot sites where water level sensors are installed. A minimum of 4 samples will be collected from each storm event. Resulting concentrations will be compiled into event mean concentrations (EMC). EMCs will be compared with predicted concentrations from long-term monitoring to determine if storm event loading is significant. Further methodological details can be reviewed in the program's DEQ-approved Quality Assurance Project Plan (QAPP) (Appendix A).

Table 2. Middle Huron River Watershed Monitoring and Evaluation

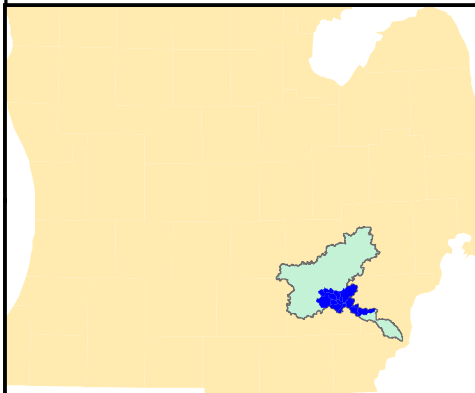
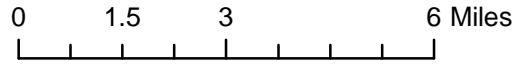
| Monitoring Site ¹ | Parameter Target | Type of Analysis | Protocol | Frequency | Responsible Party |
|---|------------------------------------|--------------------------------------|--------------------------|----------------------|-----------------------------|
| Huron River Adopt (24,26,61,62) Middle Huron (MH01) MDEQ (HR1, HR2, F1, F2 F3, F4, B1, B2, B3, B4) | S,N,DO,T,I, B, Bio ² | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ ³ |
| | | Total Suspended Solids | SM20 2540 D ⁵ | 1x/Mo Apr-Sept | HRWC to AA WTP ⁴ |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1x/Mo Apr-Sept | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1x/Mo Apr-Sept | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| | | Lake Chemistry | MDEQ protocols | 1x/Mo Apr-Sept | MDEQ ³ |
| Mill Creek Adopt (31,32,33,34,55, 57,79,80) Middle Huron (MH02A, MH02B) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| Boyden Creek Adopt (2,3,4) | Bio, T, I | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC |
| | | Conductivity | HRWC Protocol | 2-3x/year | HRWC |
| | | Avg Max Daily Summer Temp | HRWC Protocol | 3 yr interval:Summer | HRWC |
| Honey Creek Adopt (18,19,20,22) Middle Huron (MH03) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |

| Monitoring Site | Parameter Target | Type of Analysis | Protocol | Frequency | Responsible Party |
|---|---------------------------|--------------------------------------|------------------|----------------------|--------------------------|
| <i>Allens Creek</i> Middle Huron (MH04) | S, N, DO, T, I, B | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| <i>Traver Creek</i> Adopt (42,43) Middle Huron (MH05A, MH05B) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| <i>Millers Creek</i> Adopt (35,72,73,74,75, 76,77,78,86) Middle Huron (MH08) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| <i>Malletts Creek</i> Adopt (27,28,29,56) Middle Huron (MH07) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |

| Monitoring Site | Parameter Target | Type of Analysis | Protocol | Frequency | Responsible Party |
|---|---------------------------|--------------------------------------|------------------|----------------------|----------------------|
| Swift Run Adopt (41) Middle Huron (MH09) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| Fleming Creek Adopt (9,11,12,13,84) Middle Huron (MH06) | S, N, DO, T, I, B, Bio | Stream Habitat Assessment | HRWC Protocol | 3- 5 yr interval | HRWC, MDEQ |
| | | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Benthic Macroinvertebrates | HRWC Protocol | 2-3x/year | HRWC, MDEQ |
| Superior Drain #1 Middle Huron (MH10) | S, N, DO, T, I, B | Total Suspended Solids | SM20 2540 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| | | Total Phosphorus, Nitrates, Nitrites | SM20 4500 | 1-2x/Mo + Rain event | HRWC to AA WTP; MDEQ |
| | | Temp, DO, pH, Conductivity | Horiba U10 Meter | 1-2x/Mo Apr-Sept | HRWC |
| | | E. coli | SM20 9213 D | 1-2x/Mo + Rain event | HRWC to AA WTP |
| 1) Adopt = HRWC Adopt-a-Stream; Middle Huron = Middle Huron Partners tributary nutrient monitoring; MDEQ = DEQ lake monitoring | | | | | |
| 2) S= Sediment; N= Nutrients; DO= Dissolved Oxygen; T= Temperature; I= Ions; B= Bacteria; Bio= Biota | | | | | |
| 3) Specific sites will be included as part of MDEQ Water Bureau's rotational water quality monitoring program; Lakes program monitors water quality monthly | | | | | |
| 4) HRWC staff and volunteers to collect samples and deliver to Ann Arbor Water Treatment Plant for analysis under their direction. | | | | | |
| 5) Analytical protocols follow "Standard Methods for the Examination of Water and Wastewater", 20th edition, by the American Waterworks Association | | | | | |

Monitoring Sites in the Middle Huron

1



Monitoring Sites

Agency

- ! HRWC
- / MDEQ
- # Adopt-a-Stream sites

Surface water

Municipalities

Creeksheds

Sources: HRWC, Adopt-a-Stream, MHMP; DEQ Monitoring Reports.



Figure 1

Priority Project Implementation

Targeted monitoring of potential hot spots will help confirm and better define critical areas. The associated loadings of phosphorus will be quantified with initial monitoring. The data also will help to obtain better projections for the likely impact (i.e. loading reductions) of potential projects. The monitoring plan and the monitoring itself also will address the need to establish a better baseline for evaluating the success of future implementation projects, as well as progress toward load reduction targets. Once we have obtained measures of phosphorus concentrations and loading, both during various dry weather flow and during storm events, a baseline will be established that can be used to determine the nature and degree of reductions (or increases) from future projects. This approach has been utilized with great success broadly in the Middle Huron, where geographically specific phosphorus reductions were measured following the implementation of a phosphorus fertilizer ordinance.

Once sources or hot spots are identified, TMDL Implementation Plans can be developed or updated. Implementation plans have already been developed and partially implemented for three of the five approved TMDLs in the Middle Huron. Existing plans are included with this plan as follows:

- Ford and Belleville Lakes TMDL for Phosphorus (Draft) – Appendix B,
- Middle Huron River TMDL for Bacteria – Appendix C, and
- Malletts Creek TMDL for Biota – Appendix D.

The current plans contain a number of recommended activities as part of an “Action Plan.” However, many of these activities are broadly defined and lack specificity in location, responsible agency, timeline and cost. The proposed project will address some of these deficiencies by providing monitoring information that will narrow critical area definitions and target areas for employing BMPs. Among other items, these plans will be updated with information on the following:

- completed and ongoing activities to date to reduce TMDL pollutants from point and nonpoint sources;
- measurement data and information to evaluate the success of completed projects;
- assessment of new priority targets for project implementation, including source identification;
- an updated list of prioritized projects and activities complete with information on the party responsible, milestones, timelines, costs and estimated TMDL pollutant load reductions; and
- a map (and associated GIS with attribute information) of location-specific completed, ongoing, and planned activities.

All five TMDL Implementation Plans are scheduled to be finalized, in consultation with DEQ staff, by September 2011, well ahead of the schedule prescribed by TMDL guidance documents.

Work Plan and Schedule

A complete work plan and schedule for implementation of this plan, which is based on a project currently being developed with funding from the DEQ is included in Appendix E.

Permittee Responsibilities, Reporting and Progress Evaluation

HRWC will have primary responsibility for developing and implementing the monitoring plan, TMDL Implementation Plans and Progress Evaluation reports for this alternative approach. All permittees listed in “Participating Permittees” will be responsible for the following tasks:

- contribute relevant data and information upon request from HRWC;
- review the monitoring plan and assist in potential site selection;
- approve and support the monitoring plan and its implementation;
- provide past and ongoing project information and evaluation data for projects within their jurisdiction;
- assist with project identification and site selection for activities to address TMDL pollutant sources or hot spots within their jurisdiction;
- provide reasonable and accurate information about potential project commitments, milestones, timelines, costs and pollutant reduction estimates;
- review and approve final TMDL implementation plans;
- review and approve a monitoring report; and
- submit a progress report on TMDL activities according to timelines established in each permittee's COC.

All activities under this plan will be tracked and reported within progress reports as defined in Part I.B.1 of the watershed permit. Watershed monitoring data will be included and evaluated to indicate success or failure of activities under this plan. Activities to develop and implement TMDL Implementation Plans will be reported for both watershed-wide activities and within each permittee's regulated area.

Benefits, Drawbacks and Effectiveness of This Alternative Approach

The approach toward TMDL Implementation outlined in this plan will be more effective than the standard permit requirements specified in Part I.A.4.b.1 of the watershed permit for several reasons. First, this approach will be more cost-effective because it takes advantage of existing TMDL Implementation Plans, thus eliminating a duplication of effort. Second, the monitoring plan goes farther? (to more locations) and deeper (across more parameters) than what is required under the permit. Third, the monitoring plan will result in a more effective targeting of monitoring locations. Rather than focusing on a limited number of discharge points somewhat randomly, this plan's approach targets monitoring based on existing and ongoing data from ambient sites upstream to discharge points. This approach is far more likely to result in a definition of TMDL pollutant sources. Fourth, the alternative approach reduces the need for wet weather monitoring by sampling in free-flowing channels across a variety of flow conditions. This approach is easier to implement and will result in a greater number of useful data points. Finally, the alternative approach will result in the implementation of activities to reduce TMDL pollutants much earlier than the approach prescribed by the permit since it builds upon information gathered through existing monitoring efforts.

The main potential drawback of this alternative approach is that it will likely result in fewer wet weather data points from large discharge points. However, large discharge points would only be left unmonitored if existing data suggests that they are unlikely to be contributing significantly to TMDL pollutant loads.

In the unlikely event that the alternative approach described in this plan is determined, through the assessment of evaluation data, to be ineffective at discovering TMDL pollutant hot spots or sources, the watershed partners will revise the plan or revert to a plan that is

more directly consistent with the permit prescriptions. Such a decision will be made following the completion of the evaluation report in September 2011.

Attachment B:

Public Education Plan (PEP)

**PUBLIC EDUCATION PLAN
TEMPLATE**

for Middle Huron Stormwater Advisory Group Members
Participating in the Watershed Municipal Stormwater Permit
June 11, 2010

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Exhibit A – Table of PEP Tasks by Topic

I. INTRODUCTION

Purpose of Public Education Plan

In accordance with the watershed-based permit requirements for Federal Phase II Storm Water Regulations, this Public Education Plan (PEP) was prepared to instill within the residents, businesses, and officials of the communities of the Middle Huron Stormwater Advisory Group (SAG) a heightened level of awareness of the connection between individual actions and the health of their watershed and water resources. The objective of this plan is to promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in storm water.

Federal Phase II Storm Water Regulations

A 1987 amendment to the Federal Clean Water Act required the U.S. Environmental Protection Agency (EPA) to develop regulations setting forth National Pollutant Discharge Elimination System (NPDES) permit application requirements for storm water discharges from municipal separate storm sewer systems (MS4s). An MS4 is a drainage system that discharges to waters of the State and is owned or operated by a federal, state, county, city, village, township, district, association or other public body of government. Such drainage systems may include roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, or man-made channels.

Phase I of the NPDES regulations went into effect in 1990, which regulated discharges from communities with populations greater than 100,000. The rules for Phase II of the NPDES regulations were issued in 1999, requiring storm water discharge permits for communities with populations under 100,000 that have MS4s in “urbanized areas” as defined by the U.S. Bureau of the Census.

MDNRE Storm Water Discharge Permits

In Michigan the Michigan Department of Natural Resources and Environment (MDNRE) is administering the federal Phase II permitting process. MDNRE has prepared two types of EPA-approved permits. The “watershed-based” permit requirements address the storm water pollution control issues covered in the EPA’s minimum measures, while offering flexibility and cost sharing opportunities. The “jurisdiction-based permit” is closely structured to follow the EPA’s minimum measures for complying with Phase II regulations.

Several communities in the Middle Huron Watershed have applied for and obtained a Certificate of Coverage (COC) under MDNRE’s watershed-based permit and will be working together to complete many of the permit requirements. The permit requires each community to develop a number of programs to comply with federal storm water regulations. One of these requirements is the Storm Water Pollution Prevention Initiative (SWPPI). Development and submittal of this PEP is part of the SWPPI.

Required Public Education Plan Elements

The permittees shall have a program to promote, publicize, and facilitate education for the purpose of encouraging the public to reduce the discharge of pollutants in storm water to the maximum extent practicable, Watershed Permit Part I.A.4.b.2 (page 10). The public education program may involve combining or coordinating existing programs for public stewardship of water resources. The permittees in

the Middle Huron have elected to meet the PEP requirements by working collaboratively with watershed or regional partners to develop, submit, and implement a watershed-wide or regional PEP. A collaborative PEP shall demonstrate that the audiences of all permittees will be targeted. The PEP is part of and shall be submitted with the Storm Water Pollution Prevention Initiative (SWPPI). Pollution prevention shall be encouraged, Watershed Permit Part I.A.4.b.2 (page 10). Appropriate BMPs for this minimum measure and measurable goals for each BMP shall be submitted to the Department in accordance with Part I.C.1.a.

"Public" shall be defined to include all persons who potentially could affect the quality of storm water discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, and construction contractors and developers.

The PEP is designed to implement a sufficient amount of educational activities to ensure that the targeted audiences are reached with the appropriate message(s) for the following topics (Watershed Permit Part I.A.4.b.2.a (page 11)):

1. Responsibility and stewardship in their watershed
2. The connection of MS4 catch basins, storm drains, and ditches to area waterways, and the potential impacts these could have on the surface waters of the state
3. Public reporting of illicit discharges or improper disposal of materials into MS4s
4. The effects and need to minimize the amount of residential or noncommercial wastes discharged into MS4s, including:
 - i. Preferred cleaning materials and procedures for car, pavement, and power washing
 - ii. Acceptable application and disposal of pesticides, herbicides, and fertilizers
 - iii. Proper disposal practices for grass clippings, leaf litter, and animal wastes that get flushed into MS4s and the surface waters of the state
5. The availability, location, and requirements of facilities for disposal or drop-off of household hazardous wastes, travel trailer sanitary wastes, chemicals, yard wastes, and motor vehicle fluids
6. For property owners with septic systems, the proper septic system care and maintenance, and how to recognize system failure
7. The benefits of using native vegetation instead of non-native vegetation
8. For permittees with riparian land owners, methods for managing riparian lands to protect water quality
9. Additional pollutants unique to commercial, industrial, and institutional entities as the need is identified.

For all applicable topics, the PEP shall identify: (Watershed Permit Part I.A.4.b.2.b (page 11))

1. Target audience(s).
2. Key message(s).
3. Delivery mechanism(s).
4. Timetable.
5. Responsible party (or parties).

The PEP shall describe a method for determining the effectiveness of the public education program. Watershed Permit Part I.A.4.b.2.c (page 11)

The primary goal of this PEP is to address all public education requirements of the MDNRE's Watershed Municipal Storm Water Discharge Permit. In the permit application the public education topics are identified above and shall be referred to by their corresponding number in each description of collaborative activities that addresses the topic as well as on the PEP table.

Middle Huron Stormwater Advisory Group Members Participating in the Watershed Municipal Stormwater Permit

The permitted entities, who comprise the SAG, that are participating in the PEP include the following:

- Washtenaw County Water Resources Commissioner
- Washtenaw County Road Commission
- City of Ann Arbor
- City of Ypsilanti
- Village of Dexter
- Charter Township of Pittsfield*
- Charter Township of Ypsilanti
- Eastern Michigan University

It should be noted that, unlike the other participants, Pittsfield Township holds a jurisdictional permit. The Township is participating in this plan where appropriate, but it may also need to engage in additional activities to comply with jurisdictional permit requirements. Refer to the Pittsfield Township SWPPI for more details. Other entities may hold stormwater permits within the Washtenaw County portion of the Huron River Watershed, but they have not chosen to participate in this plan at this time.

II. EXISTING AND PROPOSED PUBLIC EDUCATION ACTIVITIES

To address each of the PEP requirements, the SAG will implement the following specific activities, which include a description, timeline, evaluation component, parties involved, and the required topic that the activity meets according to Watershed Permit Part I.A.4.b.2.a (page 11). Activities will be completed with the involvement of additional parties as noted in each activity description, or in cooperation with all watershed-based permit communities. Time lines for implementation of proposed activities extend from February 2010 (year 1) when implementation of the PEP begins to February 2015 (year 5) when the permit expires.

Activity #1: HRWC and/or Southeast Michigan Partners for Clean Water Informational Materials

Delivery Mechanism: Brochures, tip cards, posters, and other materials developed by HRWC or the regional public outreach campaign, “Our water. Our future. Ours to Protect”, will be utilized. The campaign materials will be distributed at municipal offices, events, and on web sites or direct mailed.

Key Messages: These materials contain information that covers required Topics 1-8. The overall campaign promotes key messages on proper use of fertilizer, car care, landscaping, storm drain awareness, household hazardous wastes, water conservation, pet care, and riparian protection.

Target Audience: Residents, visitors, public employees, businesses, industries, construction contractors and developers.

Time Line: Materials will be created and disseminated throughout the permit cycle regularly

Evaluation: For HRWC produced materials: HRWC will track number produced and method of distribution and conduct follow up surveys, focus groups and/or web hit tracking. For other materials, number distributed by permittees.

Responsible Parties: SEMCOG has materials available free with membership or for purchase, HRWC develops the materials under contract. SAG members will ensure distribution of materials to appropriate target audiences.

Required Topics met: 1-8

Activity #2: Community Watershed Calendar

Delivery Mechanism: Coordinated by HRWC, the Washtenaw Phase I/II will participate in the bulk printing and distribution of a Community Watershed Calendar to all single-family residential households. In year 2 of the permit the calendar will serve as a vehicle to promote public participation in a broad survey to determine overall PEP effectiveness (see page 13, Section IV. Evaluation of Effectiveness).

Key Messages: Calendar will feature a different tip each month for increasing public awareness of watershed issues and improving personal actions affecting the health of their watershed. Topics/messages will include key messages associated with 1-8 of the PEP topics, such as general watershed stewardship; household hazardous waste disposal; proper lawn care; car washing; storm drain pollutants; pet waste; riparian land management; and illegal dumping in storm drains.

Target Audience: Residents.

Time Line: The calendars were published for calendar year 2010 and will be produced and distributed again in years 2 and 4 of the permit.

Evaluation: Number of households receiving calendar; targeted mail, phone call survey or focus group seeking feedback regarding the calendar's specific use; and in year 2 of the permit cycle, results of broad survey of overall PEP effectiveness (see page 13, Section IV. Evaluation of Effectiveness).

Responsible Parties: SAG members, HRWC.

Required topics met: 1-8

Activity #3: Information in Community Newsletters and on Websites

Delivery Mechanism: The SAG members will regularly publish articles in their own newsletters and/or post to their own web sites. Newsletters and/or websites will also be used to show calendars of events and resources for public education and involvement. Potential web site links include SEMCOG's "Our Water. Our Future. Ours to Protect" and Washtenaw County's web site. Information will be included on watersheds, stewardship activities and events, and individual actions the public can take to protect water resources. Articles and information is available from sources such as Washtenaw County, SEMCOG and HRWC. HRWC will produce articles and information under contract quarterly for SAG members. Permittees can also obtain information for publication from Washtenaw County and SMECOG ongoing.

Key Messages: Articles and information will focus on issues represented by all 9 topics.

Target Audience: Residents, visitors, public employees, businesses, industries, construction contractors and developers.

Time Line: Starting in the first year, newsletter articles and information on web sites will be published throughout the permit cycle.

Evaluation: For HRWC produced information, frequency and number of articles, tracking of web hits to HRWC supporting pages and/or phone calls and e-mails to HRWC for related information. Hits on HRWC websites related to release or promotion. For other materials used by permittees, frequency of use in permittees newsletters, number of newsletters distributed, hits on websites.

Responsible Parties: the SAG members will publish newsletter articles and information in various distribution outlets; Washtenaw County, SEMCOG and HRWC will provide articles and information.

Required topics met: 1-9

Activity #4: Local Newspaper and Web Advertisements

Delivery Mechanism: Coordinated by HRWC, the SAG members will pay for local print news media and online advertising.

Key Messages: Watershed awareness and protection, connection of storm drains to natural water bodies, hazardous waste disposal, illegal dumping, lawn care, and car washing. Advertisements will use materials developed by Southeast Michigan Partners for Clean Streams and HRWC.

Target Audience: Residents, visitors, businesses, industries, government employees, and developers

Time Line: Start in Year 1 and ongoing throughout the permit cycle, generally advertising is placed depending on season, messaging and budget.

Evaluation: Frequency and number of advertisements run; number of inquiry calls and web hits received as a result of advertisements.

Responsible Parties: SAG members, HRWC to coordinate ad development, placement and timing.

Required topics met: 1-7

Activity #5: Promote Water Resource Protection Workshops

Delivery Mechanism: The SAG members will assist in promotion of educational workshops and programs for target audiences that will be organized through agencies such as the Washtenaw County Water Resources Commissioner, County Road Commission, MSU Extension, SEMCOG, and the Michigan Water & Environment Association.

Key Messages: Programs may include the following: Watershed Management Short Course, Home*A*Syst/ Lawn*A*Syst consultations and Master Composter program, watershed-friendly golf course management workshop, illicit discharge and connections elimination workshop, road salt BMP/de-icing alternatives workshop, land use/storm water planning workshops, and riparian land management workshops.

Target Audience: Residents, government officials and employees, construction contractors, and developers.

Time Line: Throughout the permit cycle as workshop dates are established.

Evaluation: Compilation of all promotional efforts; number of attendees from the communities of the SAG. When possible participants will be surveyed by organizer immediately following workshops.

Responsible Parties: SAG members will promote workshop events as developed by outside agencies.

Required topics met: 9 in particular, but also 1-8

Activity #6: Promote and Support Volunteer Stream Monitoring

Delivery Mechanism: Coordinated by HRWC, the SAG members will support and assist in promoting the Huron River Watershed Council's Adopt-A-Stream Program. Promotional efforts will include availability of Adopt-A-Stream literature and posting of volunteer event opportunities at Township/City Halls and announcement of volunteer event opportunities on permittee web sites and/or newsletters. HRWC will provide information ongoing to permittees on Adopt-A-Stream volunteer opportunities prior to events.

Key Messages: Adopt volunteers assess habitat, water quality, and aquatic life in the Huron River and its tributaries as part of an ongoing scientific study. The Program strives to educate watershed residents about their connection to the river and also the current conditions of the Huron River and its tributary streams. In addition, a central goal of the program is to inspire people to take actions that lead to better river protection at home and in their communities.

Target Audience: Residents.

Time Line: Start promotions in first year; on-going throughout the permit cycle.

Evaluation: Compilation of all promotional efforts; number of citizens participating in Adopt events; resulting stewardship actions taken by participants. Survey participants on how they heard about the events.

Responsible Parties: SAG members, HRWC.

Requirements met: 1 in particular, but also 2-8

Activity #7: Catchbasin/Storm Drain Labeling (for communities with storm sewers)

Delivery Mechanism: (a) The Water Resources Commissioner's Office actively implements a catchbasin marker program through the Community Partners for Clean Streams Program and the Homeowner's Handbook. Subdivision/ condominium developments, businesses and institutional landowners must have final approval of the WRC as a Community Partner for Clean Streams (where appropriate) to be eligible. The markers are installed by Homeowner Associations/residents/businesses.

(b) As opportunities arise SAG members may also implement storm drain labeling with the use of school and community volunteers to assist in affixing labels to storm drains. Along streets where storm drains are affixed, communities will distribute flyers to residential units. Limited to locations with occupancy rates of over 80% (i.e. areas not under recent construction).

Key Messages: The connection of storm drains to local waterways and the impacts of dumping pollutants into these drains.

Target Audience: Residents, Visitors and Commercial Businesses

Time Line: Ongoing throughout permit cycle.

Evaluation: Number of drains labeled and flyers distributed, number of volunteers participating.

Responsible Parties: Washtenaw County Water Resources Commissioner, SAG members, school and community volunteers, HRWC.

Required topics met: 1 and 2 in particular

Activity #8: Promote County-Wide Complaint Tracking and Response System

Delivery Mechanism: SAG members will work with Washtenaw County to publicize County-wide public reporting and response system for illicit discharges or improper disposal of materials into local storm drain systems. Environmental Reporting Line is in place. Washtenaw County Environmental Health administers the Reporting Line. This program is logged and has an updated brochure ready for distribution. Promote use of Environmental Reporting Line through partner newsletters, cable TV, web sites.

Key Messages: Public reporting of illicit discharges and/or improper disposal of materials into MS4s.

Target Audience: Residents, visitors, commercial and industrial businesses, local government officials and employees.

Time Line: Ongoing promotional efforts.

Evaluation: Number of calls to Environmental Reporting Line; results of the tracking and response system.

Responsible Parties: Washtenaw County Health Department, Water Resources Commissioner, SAG members.

Required topics met: 4

Activity #9: Promote Soil Testing

Delivery Mechanism: SAG members will work with MSU Extension and HRWC to encourage property owners to have their soil tested in the spring to avoid unnecessary fertilizer applications. MSUE currently runs a soil testing program at approximately 10 participating retailers on Saturdays in April. Master gardeners are present to answer questions and provide guidance. Homeowners drop off samples for testing for a \$15

charge. Local newspaper advertisements, web announcements and a promotional flyer encourage residents to have their soil tested.

Key Messages: Proper use and application of lawn fertilizers containing phosphorus.
Target Audience: Residents.
Time Line: Each spring throughout permit cycle.
Evaluation: Listing of point-of-sale locations where promoted; change in number of soil tests performed.
Responsible Parties: SAG members, HRWC, MSU Extension.
Required topics met: 4ii

Activity #10: Riparian Land Management Brochures

Delivery Mechanism: Coordinated by HRWC, the SAG members will distribute a brochure promoting riparian best management practices to riparian landowners via local realtors and nursery/garden retail businesses. Brochures will also be available at township offices and distributed by government officials and employees who work with riparian landowners or direct mailed to landowners.

Key Messages: Brochures will emphasize BMPs such as landscaping with native plants, buffer zones, and minimizing impervious surfaces to facilitate on-site water retention.
Target Audience: Riparian landowners, realtors, government officials and employees.
Time Line: Brochure available in year 3.
Evaluation: Number of brochures distributed, number of hits to supporting web page or phone calls received by HRWC for additional information.
Responsible Parties: SAG members, HRWC.
Required topics met: 8

Activity #11: Stream and River Crossing Road Signs

Description: The Washtenaw County Road Commission will coordinate the design and placement of stream and road crossing signs on primary roads in the county.
Target Audience: Visitors, residents.
Time Line: Begin within 2 years of COC issuance.
Evaluation: Number of signs.
Parties involved: WCRC and local community officials.
Requirements met: 1

Activity #12: Displays and Outreach at Local and Regional Fairs and Community Events

Delivery Mechanism: SAG members will promote and support stormwater education displays and outreach at local fairs and community events such as Earth Day Festivals, Green Fairs, River Days and others. They will also help promote these events through their newsletters and on websites.

Key Messages: Public awareness of watershed issues and improving personal actions affecting the health of the watershed also including key messages associated with 1-8 of the PEP topics, such as general watershed stewardship; household hazardous waste disposal; proper lawn care; car washing; storm drain pollutants; pet waste; riparian land management; benefits of native plants; and illegal dumping in storm drains.

Target Audience: Residents, visitors, community leaders.
Time Line: Ongoing annually.
Evaluation: Number of materials distributed and contacts made, e-mail addresses collected for HRWC or permittee newsletter distribution.
Parties involved: SAG members and HRWC.
Required topics met: 1-8

Activity # 13: Community Partners for Clean Streams

Delivery Mechanism: Community Partners for Clean Streams is a voluntary, no cost to participants, cooperative water quality protection program between the Washtenaw County Water Resources Commissioner's office and Washtenaw County businesses, institutions and multi-complex land owners. Partners assess how their daily site activities affect stormwater quality and commit to proactive ways to improve their activities by way of a Water Quality Action Plan. Partners are recognized for their stewardship in online and newspaper ads, at community events and through the Community Partners monthly online newsletter: "The eMonitor". SAG members will promote program in newsletters, make referrals to WCWRC regarding potential partners, and display brochures, supplied by WCWRC, promoting program.

Key Messages: Commitment to protect water quality through on-site daily activities.
Target Audience: Washtenaw County businesses, institutions, multi-complex land owners.
Time Line: On-going.
Evaluation: Number of participants.
Parties Involved: WCWRC and SAG members.
Required topics met: 1-9

Activity #14: Pollution Prevention Inspections

Delivery Mechanism: The Pollution Prevention Program is responsible for inspecting facilities that store, manufacture, or use hazardous, toxic, or polluting materials.

Key Messages: Inspectors ensure that facilities utilize and dispose of hazardous materials properly, thereby preventing environmental contamination. This program operates in accordance with the Washtenaw County Pollution Prevention Regulation.
Target Audience: Facilities that store, manufacture or use hazardous, toxic, or polluting materials.
Time-line: On-going.
Evaluation: Inspection reports and improvements made.
Parties involved: Washtenaw County Environmental Health and Water Resources Commissioner.
Required topics met: 9

Activity #15: Issues of the Environment Radio Show

Delivery Mechanism: Weekly radio shows; every Wednesday morning from 8:20-8:30am the Washtenaw County Division of Public Works hosts a special guest speaker on the Issues of the Environment Radio Show on WEMU (89.1 FM).

Key Messages: Varies by show topic, but generally addresses environmental stewardship and related issues.
Target Audience: Washtenaw County residents and businesses.
Time Line: Ongoing weekly show, frequency of water quality related topics may be quarterly.
Evaluation: Number of water quality related program topics covered.
Parties involved: Washtenaw County Environmental Health Division.
Required topics met: 1-9

Activity #16: Environmental Excellence Awards

Delivery Mechanism: The Environmental Excellence Awards Program recognizes businesses and non-profit organizations in Washtenaw County that practice environmentally sound behavior in the areas of water quality protection, waste reduction and recycling, and pollution prevention. This award is provided once year.

Key Messages: Water quality protection, waste reduction and recycling, and pollution prevention.
Target Audience: Businesses, institutions, multi-complex developments.

Time Line: Annually.
Evaluation: Number of award recipients.
Parties involved: Washtenaw County Water Resources Commissioner, Environmental Health Division, and Solid Waste Management.
Required topics met: 1-9

Activity #17: Fats, Oils, and Grease and Litter Reduction

Delivery Mechanism: Ninth Section of the Community Partners for Clean Streams Handbook and program presentations. Coordinated with Washtenaw County Food Service Inspection Program.
Key Messages: Proper disposal of cooking fats, kitchen maintenance practices and recycling best management practices.
Target Audience: Washtenaw County businesses.
Time Line: On-going.
Evaluation: Number of participants and number of actions corrected.
Parties involved: Washtenaw County Water Resources Commissioner, Environmental Health Division.
Required topics met: 9 N

Activity #18: River Safe Homes Program

Delivery Mechanism: Online and hard copy surveys determine how activities around the home protect water quality. Improvement resources are included. Participants receive a RiverSafe Homes plaque for satisfactorily completing the survey and a quarterly “eReporter” online newsletter.
Key Messages: Protecting water quality around the home is easy to do and produces significant results.
Target Audience: Washtenaw County residents.
Evaluation: Number of participants.
Party Involved: Washtenaw County Water Resources Commissioner.
Required Topics met: 1-5, 7-8.

Activity #19: Other Public Education Activities Related Specifically to E. coli and phosphorus TMDLs

Delivery Mechanism: The SAG’s TMDL plan and grant work plan indicate that the SAG will be developing TMDL implementation activities ongoing. This PEP will also be revised and updated to include those specific activities. Currently the City of Ann Arbor, Charter Township of Pittsfield and Charter Township of Ypsilanti have enacted ordinances restricting the use of phosphorus lawn fertilizer. They each also have produced and distribute to retailers and service providers point of sale brochures about the ordinances targeting consumers ongoing. Additionally a general brochure encouraging consumers to use phosphorus free lawn fertilizer products has been produced by the City of Ann Arbor for distribution in Middle Huron areas without ordinances and is available from HRWC for permittee use. Key messages about pet waste are included in activities #1-4 above but may also be developed as part of TMDL implementation.
Key Messages: Protect water quality by using phosphorus free lawn fertilizer and disposing of pet waste properly.
Target Audience: Washtenaw County residents and consumers of lawn fertilizer products and services.
Evaluation: Reduction of E. coli and phosphorus.
Party Involved: SAG permittees.
Required Topics met: 4(ii) and (iii).

Activity #20: Residential Rain Garden Program

Delivery Mechanism: The Washtenaw County Water Resources Commissioner works with several families each year to plan, design and install rain gardens on their properties as funding is available. The WCWRC's website provides extensive information to promote and support "do-it-yourself" rain gardeners.

Key Messages: Protecting water quality and preventing stormwater runoff through the use of rain gardens with native plants.

Target Audience: Washtenaw County residents.

Evaluation: Number of participants and number of rain gardens installed and maintained.

Party Involved: Washtenaw County Water Resources Commissioner

Required Topics met: 7

Activity #21: Washtenaw County Home Toxics Reduction Program

Delivery Mechanism: Provides the residents of Washtenaw County with a disposal option for flammable, poisonous, toxic and corrosive materials by providing the Washtenaw County Home Toxics Collection Center in Scio Township, along with informational materials for the public that promote the collection center and proper disposal of home toxics.

Key Messages: The program seeks to address the environmental (including water quality) and public health effects resulting from improper handling and disposal of home toxics, and is committed to reducing the use of home toxics and keeping citizens informed about the choices and responsibilities associated with purchasing, handling and disposing of toxic substances.

Target Audience: Washtenaw County residents

Evaluation: Number of drop offs/quantity of disposal materials.

Party Involved: Washtenaw County Environmental Health Division and SAG members who promote the Home Toxic Reduction Program

Required Topics met: 5

Activity #22: Proper Disposal of Prescription Drugs and Personal Care Products/Pharmacy Drug Take-Back Program

Delivery mechanism: County website, brochure, video, outlining proper disposal of unused prescription drugs and personal care products; network of local pharmacies (currently eight) participating in a drug-take-back program. County funded contractor to provide drug pick up from participating pharmacies, and proper disposal. Brochures are placed at various local pharmacies, doctors' offices, government buildings. (web site : http://www.ewashtenaw.org/government/departments/planning_environment/environmental_issues/medications_disposal/).

Key Messages: "Don't rush to flush," keep Rx Drugs and personal care products out of our water systems, proper medication disposal.

Target Audience: Washtenaw County residents.

Evaluation: Quantity of pharmaceuticals brought into participating pharmacies.

Party Involved: Washtenaw County Environmental Health and WRC

Required Topics met: 1, 5

III. OTHER INVOLVED ORGANIZATIONS

In implementing this Public Education Plan, the SAG members will pursue cooperative partnerships plus information and resource sharing with several organizations, including:

| Organization | Program | Contact if known |
|--|---|---------------------------|
| Washtenaw County Water Resources Commissioner | Partners for Clean Streams, Illicit Discharge & Dumping Response System, Educational Literature, River Safe Homes | Janis Bobrin |
| Washtenaw County Road Commission | Watershed Signs | Steve Puuri |
| Washtenaw County Health Department | Water Quality Monitoring Program | |
| Washtenaw County Planning and Environment | Household Hazardous Waste Collection Site, composting, waste disposal and recycling | |
| Huron River Watershed Council | Middle Huron Initiative, Adopt-A-Stream Program, Information and Education Campaign | Ric Lawson Pam Labadie |
| MSU Extension | Soil Testing, Watershed Management Short Course, Home*A*Syst Program, Lawn*A*Syst Program | |
| Southeast Michigan Council of Governments | Workshops, educational events, and public education materials | Amy Mangus |
| Michigan Department of Natural Resources and Environment | Water Resources Division, Surface Water Assessment Section | Bill Creal |
| Huron-Clinton Metropark Authority and | Environmental Education and Interpretive Programs | Dave Moilanen |
| | | |
| | | |

IV. EVALUATION OF EFFECTIVENESS

Evaluation of the overall effectiveness of the PEP will consist of a combination of both the accumulated measures of the effectiveness of the PEP's individual activities and a measure of the effectiveness of the sum of all the activities through a carefully developed, coordinated survey conducted by the permitted entities.

Evaluation of accumulated measures of the effectiveness of the PEP's individual activities success can be categorized in terms of output (i.e., effort or activity) that measures short-term goals and milestones. Examples of output measurements include tracking web site hits or the number of literature pieces distributed to a target audience. When practicable, measurements of outcome (i.e., results that indicate actual behavior change) will be incorporated into BMP evaluations. Such measures are expected to include public comment and feedback, level of participation in programs and activities, and tools that measure behavior change, such as follow-up phone surveys on direct-mail literature, or redemption rates of bulk mailing and

soil testing coupons. When applicable, these measures will be coordinated with other communities and organizations.

The broad survey will be administered in year 2-3 of the permit cycle in conjunction with Activity #2, the watershed community calendar. The survey's target audience will be residents of the permitted entities and sample size will be based upon their combined household units, such that a large enough sample size will be obtained to generate statistically significant results between subpopulations and with previous surveys. The survey will measure public awareness of stormwater pollution and possible solutions, environmental attitudes, capacity, constraints, behaviors and, when appropriate, effectiveness of specific public education activities. The survey will primarily be conducted over the web with respondents recruited by mail and e-mail, through advertising, direct in-person contact and social media. Additional supplemental methods, such as direct mail and phone will be used to obtain a reasonable sample size or to fill in demographic gaps as needed. Results will serve to provide a basis for evaluating PEP activities going forward, and will provide an opportunity to benchmark social indicators for subsequent permit cycles. Questions will be designed to reasonably compare with previous survey efforts.

V. PROGRESS REPORT

By the date indicated on the Certificate of Coverage, the SAG Members will submit to the MDNRE an Annual Progress Report on the implementation status of its permit and the progress of pollution prevention. This report will include documentation of PEP efforts, a summary of the evaluation of its effectiveness when appropriate, and any proposed revisions or amendments. Reporting on PEP efforts will reflect data gathered on a calendar year basis.

PEP TABLE BY TOPIC

Middle Huron Stormwater Advisory Group
 Watershed Municipal Stormwater Permit

| Public Education Topics | Target Audience(s) | Key Message | Standard of Effectiveness (recommended) | Delivery Mechanism/Activity # | Mechanism Specific Audience (recommended) | Mechanism Specific Message(s) (recommended) | Milestone(s) (recommended) | Timetable / Timeline | | Responsible Party | Cost (recommended) | Evaluation |
|--|--|---|--|---|--|--|---|--|---|--|--|---|
| | | | | | | | | Development | Implementation | | | |
| 1. Personal watershed stewardship | residents, visitors, businesses, public employees, industries, construction contractors and developers | - Definition of Watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities | get 50% of people in a watershed to understand what a watershed is | 1. Brochures, tip cards, and other materials | distributed to homeowners throughout watershed | Same as key message | | Use existing Southeast Michigan Partners for Clean Streams or WRC informational materials or tip card materials developed by HRWC or WRC in years 1, 3 and 5 | produce, print and distribute in years 1, 3 and 5 | HRWC to coordinate and produce under contract, communities to distribute | cost of staff hours, graphic design, photography, printing and mailing or delivery | number of materials distributed increase in hits to HRWC websites, post mailing survey and/or evaluative focus group, overall evaluative survey |
| | | | | 2. watershed community calendar | distributed to homeowners throughout watershed | Same as key message | Measure of number of people recognizing the watershed they live in | develop information, photos, graphics for calendar in spring/summer years 2(2011) and 4 (2013) | produce, print and distribute calendar in years 2 (2011) and 4 (2013) | HRWC to coordinate production and printing under contract, communities to distribute | cost of staff hours, graphic design, photography, printing and mailing or delivery | number of calendars distributed, increase in hits to HRWC's website based on the information in the calendar, follow up survey, overall evaluative survey |
| | | | | 3. Seasonal articles in community newsletters and information and links on community websites | residents, businesses, industries | Same as key message | Measure of number of people that understand the definition of a watershed and how they can effect the watershed | develop and produce seasonal articles quarterly and/or as needed | distribute to communities for use in newsletters and post to websites on going | HRWC, WCWRC to develop materials for articles and websites, communities to distribute | cost of staff hours, printing and mailing | number of newsletters distributed, hits to community website where materials posted, overall evaluative survey |
| | | | | 4. advertisements in local newspaper and on local media websites | residents, owners and employees of local businesses and industries | Shortened ad appropriate version of key message seasonally timed | Measure number of people implementing recommended steps to prevent pollution | HRWC to produce new or update existing ads as needed or use of existing SEMCOG ads | Advertising placed seasonally (depending on key message) throughout permit time frame | HRWC to coordinate production and placement of advertising | cost of staff hours, graphic design, and advertising rates | number and timing of ads places and hits to HRWC's website based on the information presented, overall evaluative survey |
| | | | | 6. Promote and support volunteer stream monitoring as a means to protect the watershed | residents | Same as key message | increase in number of volunteers participating in program | HRWC has existing monitoring program and materials | Communities to promote monitoring events/opportunities on-going | HRWC to run stream monitoring program and provide events and materials, communities to promote | materials development, printing, staff time to run monitoring program | number of volunteers participating in monitoring events on a repeat basis and their commitment to program |

PEP TABLE BY TOPIC

Middle Huron Stormwater Advisory Group
 Watershed Municipal Stormwater Permit

| Public Education Topics | Target Audience(s) | Key Message | Standard of Effectiveness (recommended) | Delivery Mechanism/Activity # | Mechanism Specific Audience (recommended) | Mechanism Specific Message(s) (recommended) | Milestone(s) (recommended) | Timetable / Timeline | | Responsible Party | Cost (recommended) | Evaluation |
|-----------------------------------|--|---|--|---|---|--|--|---|--|-----------------------------|--|--|
| | | | | | | | | Development | Implementation | | | |
| 1. Personal watershed stewardship | residents, visitors, businesses, public employees, industries, construction contractors and developers | - Definition of Watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities | get 50% of people in a watershed to understand what a watershed is | 7. Catch basin marker program through Community Partners for Clean Streams and Homeowners Handbook and as opportunities arise for individual SAG members to install labels with the help of school and community volunteers | Residents, visitors, commercial businesses | Connection of storm drains to local waterways and impacts of dumping | Number of catch basins and stormdrains labeled | WRC already has existing catch basin marker program, SAG members will develop as opportunity arises | WRC currently implements, SAG members will implement as able throughout permit cycle | WRC, individual SAG members | cost of staff hours to coordinate and materials | Number of residents, businesses that install marks/labels, number of volunteers participating, number of stormdrains labeled, number of flyers distributed |
| | | | | 11. Stream and river crossing road signs | Residents, visitors traveling by car or on foot | Entering watershed or creek or river specific information | Measure of number of people recognizing the watershed they live in or the water body near them | WCRC already has a program in place for sign production and placement | As appropriate locations are identified throughout the permit cycle | WCRC | cost of staff hours to coordinate, materials, installation | Number of signs installed and locations |
| | | | | 12. Displays and outreach at local community events and fairs staffed by SAG members and HRWC and community volunteers | Residents | Promote watershed awareness and simple steps at home for protecting | Measure of number of people recognizing watershed and taking steps to protect | SAG members and HRWC to use existing materials produced by HRWC, SEMCOG, WRC | SAG members and HRWC identify and commit to opportunities to exhibit as they arise | SAG members and HRWC | cost of staff hours, materials | Number of events, number of materials distributed at events, number of community volunteers staffing at events, number of contacts made and/or email addresses collected |
| | | | | 15. Issues of Environment Radio Show | Washtenaw County residents and visitors | Promote watershed awareness and simple steps at home for protecting | Measure of number of people recognizing watershed and taking steps to protect | Radio show is already an ongoing weekly program of Washtenaw County Environmental Health Division | Water quality issues are addressed at least quarterly | WCEHD | cost of staff hours, overhead and equipment | Number of water quality related program topics covered |

PEP TABLE BY TOPIC

Middle Huron Stormwater Advisory Group
 Watershed Municipal Stormwater Permit

| Public Education Topics | Target Audience(s) | Key Message | Standard of Effectiveness (recommended) | Delivery Mechanism/Activity # | Mechanism Specific Audience (recommended) | Mechanism Specific Message(s) (recommended) | Milestone(s) (recommended) | Timetable / Timeline | | Responsible Party | Cost (recommended) | Evaluation |
|-----------------------------------|--|---|--|--|--|---|--|-----------------------------|------------------------------------|-----------------------------------|---------------------------|--|
| | | | | | | | | Development | Implementation | | | |
| 1. Personal watershed stewardship | residents, visitors, businesses, public employees, industries, construction contractors and developers | - Definition of Watershed - Education on the specific watershed(s) the public will/can affect - Purpose for protecting the watershed - Ways that individuals can affect the watershed through their activities | get 50% of people in a watershed to understand what a watershed is | 16. Environmental Excellence Awards Program which recognizes businesses and non-profits in Washtenaw County that practice environmentally sound behavior in areas of water quality protection among others | Businesses, institutions, multi-complex developments | Water quality protection, waste reduction and recycling and pollution prevention | increase in number of applicants/participants and award recipients | Existing program run by WRC | Continuing throughout permit cycle | WRC, other SAG members to promote | staff costs and materials | Number of award recipients |
| | | | | 18. River Safe Homes Program -- online and hard copy surveys of homeowners determining and informing of home activities that protect water quality | Washtenaw County residents | Protecting water quality around the home is easy to do and produces significant results | Increase in participants | Existing program run by WRC | Continuing throughout permit cycle | WRC, other SAG members to promote | staff and materials costs | Number or participants or residents who are deemed to have RiverSafe homes |

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| | | | | | | | | Development | Implementation | | | |
| 2. Ultimate storm water discharge location and potential impacts | residents, schools, owners and employees of local businesses and industries, boy/girl scouts, volunteers groups | Storm drains discharge to water bodies. Storm water discharged from separate storm sewer systems does not receive treatment prior to discharge. Impacts of storm water pollutants in the watershed. Knowledge of separate storm water drainage system in a neighborhood and the water body to which the storm water is discharged | get 50% of the people in the watershed to understand where their storm water goes and what the impacts are | Activities 1, 2, 3, 4, 7, 12, 15 and 18 identified above | | | | | | | | |
| 3. Public reporting of illicit discharges | Residents, visitors to the area, public employees, businesses, industries, construction contractors and developers | - Illicit Discharge - what it is and what to look for - Promotion of illicit discharge reporting system and how to report an illicit discharge - Water quality impacts associated with illicit discharges and improper waste disposal - Identification of failing on-site sewage disposal systems - physical symptoms to watch for - Consequences and penalties associated with illicit discharges and improper waste disposal | Eliminate all illicit discharges to storm drains and waterways | Activities 1, 2, 3, 12, 15 and 18 identified above 8. Promote County-wide complaint tracking and response system. | Residents, visitors, commercial and industrial businesses, local govt officials, and employees | Protect water quality by reporting illicit discharges and improper disposal of materials into catch basins, storm drains, etc. | Increase in reporting | Washtenaw County Environmental Health has and administers Environmental Reporting Line with brochure ready for distribution | Continuing throughout permit cycle | WCEHD to administer and promote complaint and tracking response system, SAG members to promote when possible | staff, equipment, materials | Number of phone calls to reporting line, reduction in incidents, results of tracking and response system |

PEP TABLE BY TOPIC

Middle Huron Watershed
Stormwater Municipal
Advisory Group Stormwater
Permit

| Public Education Topics | Target Audience(s) | Key Message | Standard of Effectiveness (recommended) | Delivery Mechanism/Activity # | Mechanism Specific Audience (recommended) | Mechanism Specific Message(s) (recommended) | Milestone(s) (recommended) | Timetable / Timeline | | Responsible Party | Cost (recommended) | Evaluation |
|----------------------------------|--|--|--|---|--|--|---|--|--|--|---|---|
| | | | | | | | | Development | Implementation | | | |
| 5. Waste management assistance | Residents, visitors to the area, public employees, businesses, industries, institutions, construction contractors and developers | requirements, and availability for household hazardous wastes & other chemicals. - Motor vehicle fluids - Travel trailer sanitary wastes - Recreational boating sanitary wastes (recommended for inclusion in PEP) - Yard wastes - Disposal of prescription drugs and personal care products | On residents dropping of household hazardous waste during household hazardous waste collection events by 25% and increase quantity of pharmaceuticals turned into pharmacies participating in drug take-back program | 22. Proper disposal of prescription drugs and personal care products/pharmacy take back program | Residents of Washtenaw County who use and dispose of personal care products and prescription drugs | Don't flush drugs and personal care products. Take drugs to participating pharmacies for proper disposal. | Increase in quantity of pharmaceuticals turned into pharmacies participating in take back program | Program ongoing and administered by Washtenaw County Environmental Health Division and WRC | Continuing throughout permit cycle | WCEHD and WRC, SAG members and HRWC to promote | | Increase in drop offs of prescription drugs at participating pharmacies |
| | | | | 21. Washtenaw County Home Toxics Reduction Program | Home toxics collection center and informational/promotional materials | Reduce the use of home toxics, inform of environmental and health effects from improper handling, storage and disposal and encourage proper techniques | Increase in use of household hazardous waste collection facilities | Program ongoing and administered by Washtenaw County Environmental Health Division | Continuing throughout permit cycle | WCEHD, SAG members and HRWC to promote | staff, facility, equipment, materials, disposal, etc. | Increase in use of home toxics collection center by residents, number of brochures distributed, ads run, etc. |
| 6. Septic System Maintenance | Septic system owners, riparian land owners, septage haulers, realtors, home inspectors, new homeowners | - Proper Septic system care and maintenance - How to recognize system failure - Impact failing systems have on water quality - Where to go for assistance | Educate all septic system owners on proper care and maintenance and how to recognize failing systems | Activities 1, 2, 3, 4, 12, and 15 identified above | | | | | | | | |
| 7. Benefits of native vegetation | Landowners, road maintenance crews, parks and recreation staff, landscaping companies and hardware stores. | Using native plants, specifically for a vegetative riparian buffer or rain garden is vital to stream health and improving water quality - wildlife habitat - reduced cost of mowing - reduced chance of introducing invasive aquatic nuisance species | Increase the use of native plants by residents in home gardens | Activities 1, 2, 3, 4, 12, 15, 16, and 18 identified above | | | | | | | | |
| | | | Realize an increase in the use of native plants and the installation of rain gardens by residents | 20. Residential rain garden program run by Water Resources Commissioner that helps homeowners plan, design and install rain gardens | Homeowners in Washtenaw County | Install rain gardens, and go native – use native plant species to protect the environment by improving water quality and creating wildlife habitat | Number of homeowners participating in program | Program already up and running | Ongoing throughout permit cycle as funding available | WRC | Staff, materials, design professional | Number of rain gardens installed and number of applicants to program who install a rain garden independently |

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Middle Huron Watershed
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| | | | | | | | | Development | Implementation | | | |
| 8. Management of riparian lands | Riparian land owners, developers, contractors, engineering firms, recreational users, lawn care companies, landscapers, lake & stream associations, golf courses, sportsmen | - Importance of riparian corridors - BMPs for riparian lands - Protection through use of conservation easements - Lawn maintenance for water quality - Landscaping for water quality - Shoreline stabilization techniques - Proper management of grass clippings, leaf litter, animal wastes, and other wastes | Inform residential riparian landowners how to better manage the land to protect water quality | Activities 3, 15, 16 and 18 as identified above | riparian home owners, members of lake associations | Same as key message | Number of brochures distributed and measurement of hits to website disseminating information | Develop content or update existing direct mail brochure by Jan 2011 | Provide to communities to distribute or direct mail spring 2011 | HRWC to develop or obtain brochure and coordinate printing and mailing | cost of staff hours, printing and mailing | number of brochures distributed, hits to community and HRWC website where materials are posted |
| | | | | 10. Distribute brochure to residents offering tips on best practices | | | | | | | | |
| 9. Entity specific | Commercial operations, | • Chemicals (i.e. salt for deicing) need to be stored under cover and handled in a manner that reduces the exposure of the chemicals to storm | Reduce the amount of spillage during chemical handling | Activities 3, 5, 15, and 16 identified above | Washtenaw County businesses, institutions and multi-complex land owners | Commitment to protect water quality in onsite daily activities | Increase in number of participants in program | Program currently administered by WRC | Ongoing throughout permit cycle | WRC | staff and materials costs | Number of participants |
| | | | | 13. Community Partners for Clean Streams Program wherein partner businesses, institutions and multi-complex land owners assess daily site activities for improvement and implement a Water Quality Action Plan | | | | | | | | |

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| | | | | | | | | Development | Implementation | | | |
| pollutants | industrial operations and institutions | water runoff. • Grease, food wastes and litter form food preparation establishments(restaurants, school cafeterias, etc...) | | 14. Pollution prevention inspections program | Facilities that store, manufacture, or use hazardous, toxic or polluting materials | Inspectors ensure proper use and disposal of hazardous materials | Increase in improvements made as a result of inspection | Program currently administered by WRC and WCEHD | Ongoing throughout permit cycle | WRC and WCEHD | staff and materials costs | Number of inspections and improvements made as a result |
| | | | | Proper disposal of cooking fats, kitchen maintenance practices and recycling best management practices | 17. Fats, Oils, Grease and Litter Reduction is specifically addressed by the Community Partners for Clean Streams program in conjunction with the Washtenaw County Food Service Inspection Program | Washtenaw county businesses and entities engaged in food service | Proper disposal of cooking fats, kitchen maintenance practices and recycling best management practices | Number of actions needed correction decreases | Program currently administered by WRC and WCEHD | Ongoing throughout permit cycle | WRC and WCEHD | staff and materials costs |