

# **Permit Application Discharge of Storm Water to Surface Waters of the State from a Municipal Separate Storm Sewer System**

## **Storm Water Management Plan**

**Prepared For:  
Macomb Township  
Macomb, Michigan**

**November 18, 2019  
Project No. 140885**

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**List of Abbreviations/Acronyms**

BMP	Best Management Practices
CRWC	Clinton River Watershed Council
DLEG	Department of Labor and Economic Growth
EGLE	Michigan Department of Environment, Great Lakes, and Energy
ERP	Enforcement Response Procedure
IDEP	Illicit Discharge Elimination Program
IPM	Integrated Pest Management
LEPC	Local Emergency Planning Committee
MDA	Michigan Department of Agriculture
MDEQ	Michigan Department of Environmental Quality
mph	miles per hour
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
O&M	operation and maintenance
OMCPWC	Office of Macomb County Public Works Commissioner
PEAS	Pollution Emergency Alerting System
PEP	Public Education Program
PPP	Public Participation/Involvement Program
SERC	State Emergency Response Center
SOP	Standard Operating Procedure
SWMP	Storm Water Management Plan
TMDL	total maximum daily load
Township	Macomb Township

## Storm Water Management Program

The purpose of the Macomb Township (Township) Storm Water Management Plan (SWMP) is to meet the requirements of the National Pollutant Discharge Elimination System (NPDES) permit for discharges of storm water to surface waters of the state from the Municipal Separate Storm Sewer Systems (MS4s) located in the Township's urbanized areas. A map of the urbanized areas is provided in Appendix 1, and a table detailing the various Township MS4s is provided in Appendix 2. This plan consists of six minimum measures, which include:

1. Public Participation/Involvement Program
2. Public Education Program
3. Illicit Discharge Elimination Program
4. Construction Storm Water Runoff Control Program
5. Post-Construction Storm Water Runoff Program
6. Pollution Prevention and Good Housekeeping Program

Additionally, this SWMP includes the Township Total Maximum Daily Load (TMDL) Implementation Plan to address the *E. coli* TMDL for Deer Creek, Lake St. Clair Metropolitan and Memorial Beaches, and Clinton River.

For your convenience, the questions included in the Storm Water Discharge Permit Application are **bolded** in this SWMP. After each item/question, we have included, as applicable, the required Best Management Practice (BMP), measurability, and schedule the Township will implement; each minimum control measure to be used; and the applicable water quality requirements during the permit cycle.

## Enforcement Response Procedure

1. Provide the [Enforcement Response Procedure] ERP. The ERP shall include the applicant's expected response to violations to compel compliance with an ordinance or regulatory mechanism implemented by the applicant in the Storm Water Management Plan (SWMP) (e.g., written notices, citations, and fines). The ERP shall contain a method for tracking instances of non-compliance, including, as appropriate, the name of the person responsible for violating the applicant's ordinance or regulatory mechanism, the date and location of the violation, a BMP of the violation, a BMP of the enforcement response used, a schedule for returning to compliance, and the date the violation was resolved. The applicant may keep an electronic file or hard copy file of the enforcement tracking.

**BMP:** The Township is the sole owner of all regulated facilities and will address any violations to the Township Ordinance or regulatory mechanisms within this SWMP. Violations will be reported to the Township Water and Sewer Department or Facility and Grounds Department. The Superintendent, Assistant Superintendent, or their appointed employee will coordinate the necessary action to resolve the violation. The violation and response will be tracked on the Township's ERP Tracking Form, a copy of which is included as Appendix 3. The Township has a goal of two weeks to address minor violations. The Township will work proactively to address larger violations within 30 days. If more time is needed to correct the violations, the Township will provide a specific schedule to return to compliance.

**Schedule:** Upon notification of the violation to the Township Water and Sewer Department or Facility and Grounds Department, the appropriate department will enter the violation and follow up response into the ERP Tracking Form. The Township has a goal of two weeks to address minor violations. The Township will work proactively to address larger violations as soon as is reasonably practicable.

## Public Participation/Involvement Program

2. Provide the procedure for making the SWMP available for public inspection and comment. The procedure shall include a process for notifying the public when and where the SWMP is available and of opportunities to provide comment. The procedure shall also include a process for complying with local public notice requirements, as appropriate.

**BMP:** The Township will make the approved SWMP available for public inspection and comment on the Township Water and Sewer Department web page. All Township residents and businesses will be notified of the availability of the SWMP, and its location on the website through annual Water Quality Reports.

**Measurability:** A link on the Township website and notification in the annual Water Quality Reports will serve as documentation of notification of the availability of the SWMP and opportunity for public input.

**Schedule:** The Township will maintain a link to the SWMP. The Township will notify residents and businesses annually.

3. Provide the procedure for inviting public involvement and participation in the implementation and periodic review of the SWMP.

**BMP:** The Township website and annual Water Quality Reports will provide contact information directing residents and businesses to contact the Township Water and Sewer Department for any comments related to the SWMP.

**Measurability:** A link on the website and notification in the annual Water Quality Reports will serve as documentation of the invitation for public input.

**Schedule:** The Township will maintain the contact information on the website. The Township will notify residents and businesses annually.

## Public Education Program

The Township has retained the Clinton River Watershed Council (CRWC) to assist the Township in the implementation of the Public Education Program (PEP). The CRWC has prepared a collaborative PEP for the Clinton River Watershed, Anchor Bay Watershed, and the Lake St. Clair Direct Drainage Watershed.

This PEP will be implemented by the CRWC, with assistance from the Township. The PEP is provided in Appendix 4. Appendix 5 contains a summary of the BMPs that will be implemented; a measurable goal(s), schedule for implementation, interim milestones for each BMP. This document addresses Items 4 through 6 of the Storm Water Discharge Permit Application.

## Illicit Discharge Elimination Program

7. Provide the location where an up-to-date storm sewer system map(s) is available. The map(s) shall identify the following: the storm sewer system, the location of all outfalls and points of discharge, and the names and location of the surface waters of the state that receive discharges from the permittee's MS4 (for both outfalls and points of discharge). A separate storm sewer system includes: roads, catch basins, curbs, gutters, parking lots, ditches, conduits, pumping devices, and man-made channels. A storm sewer system map(s) may include available diagrams, such as certification maps, road maps showing rights-of-way, as-built drawings, or other hard copy or digital representation of the storm sewer system.

**BMP:** The Township maintains record drawings at the Water and Sewer Department. The drawings indicate the storm sewers and locations of each outfall or discharge point at each Township property. Any new construction on Township property will require an Engineering Plan, which will serve as the storm sewer system map.

**Measurability:** Maintain copies of existing maps. Update maps as applicable.

**Schedule:** Ongoing, and as new construction is completed.

8. Provide the procedure for prioritizing the applicant's MS4 for detecting non-storm water discharges. The goal of the prioritization process is to target areas with high illicit discharge potential. The procedure shall document the process for selecting each priority area using the list below.

- Areas with older infrastructure
- Industrial, commercial, or mixed use areas
- Areas with a history of past illicit discharges
- Areas with a history of illegal dumping
- Areas with septic systems
- Areas with older sewer lines or with a history of sewer overflows or cross-connections
- Areas with sewer conversions or historic combined sewer systems
- Areas with poor dry-weather water quality
- Areas with water quality impacts, including waterbodies identified in a Total Maximum Daily Load
- Priority areas applicable to the applicant not identified above

**BMP:** The Township has a relatively small number of properties; therefore, all of the MS4s are considered of equal priority.

**Measurability:** The Township will review the need to reprioritize as new Township MS4s are constructed.

**Schedule:** Review prioritization bi-annually, or as new MS4s are constructed.

9. Provide the geographical location of each prioritized area using either a narrative BMP or map and identify the prioritized areas that will be targeted during the permit cycle.

**BMP:** A map of the Township properties is provided in Appendix 6.

**Measurability:** Update map as new MS4s are constructed.

**Schedule:** Update map bi-annually, and as new MS4s are constructed.

10. Provide the procedure for performing field observations at all outfalls and points of discharge in the priority areas as identified in the procedure above or for the entire MS4 during dry-weather at least once during the permit cycle. The procedure shall include a schedule for completing the field observations during the permit cycle or more expeditiously if the applicant becomes aware of a non-storm water discharge. As part of the procedure, the applicant may submit an interagency agreement with the owner or operator of the downstream MS4 identifying responsibilities for ensuring an illicit discharge is eliminated if originating from the applicant's point(s) of discharge. The interagency agreement would eliminate the requirement for performing a field observation at that point(s) of discharge.

The focus of the field observation shall be to observe the following:

- Presence/absence of flow
- Deposits/stains on the discharge structure or bank
- Vegetation condition
- Structural condition
- Biology, such as bacterial sheets, algae, and slimes
- Water clarity
- Color
- Odor
- Floatable materials

**BMP:** The Township has a relatively small number of outfalls and points of discharge; therefore, will perform dry weather screening of all Township owned MS4s. If the Township is made aware of a non-storm water discharge within its MS4 during the permit cycle, the Water and Sewer Department will oversee the remediation of the

source of the discharge. The scheduled inspections will be performed utilizing an Outfall and Point of Discharge Inspection Form, which will be completed for each outfall. A copy of the Inspection Form, which includes the field observation of the items listed above, is provided in Appendix 7.

**Measurability:** Copies of completed inspection forms, including a description of the remediation measures taken.

**Schedule:** All outfalls and points of discharge will be inspected once during the permit cycle. Upon notification of a non-storm water discharge to the Township Water and Sewer Department, the Township's goal is one week to address minor discharges. The Township will work proactively to address larger discharges as soon as is reasonably practicable.

- 11. Provide the procedure for performing field screening if flow is observed at an outfall or point of discharge and the source of an illicit discharge is not identified during the field observation. Field screening shall include analyzing the discharge for indicator parameters (e.g., ammonia, fluoride, detergents, and pH). The procedure shall include a schedule for performing field screening.**

**BMP:** Upon observing flow at an outfall or point of discharge during dry weather screening, the inspector will systematically inspect the storm sewer system until the source of the flow is identified. If it is unclear whether the source of the flow is storm water, field screening will be performed within two days of discovery. Additional field screening may be necessary at manhole and catch basin structures to assist in tracking the source. The field screening results will be recorded on the Outfall and Point of Discharge Inspection Form. Screening parameters are identified on the Outfall and Point of Discharge Inspection Form and include visual observations for odor, color, turbidity, floatables, deposits/stains, vegetation, and structure and a field analysis for ammonia, fluoride, detergents, and pH.

**Measurability:** Copies of completed inspection forms, including a description of the remediation measures taken.

**Schedule:** Upon the evidence of flow, all outfalls and points of discharge will be screened once during the permit cycle, if the source is not readily identifiable.

- 12. Provide the procedure for performing a source investigation if the source of an illicit discharge is not identified by field screening. The procedure shall include a schedule for performing a source investigation.**

**BMP:** Upon observing flow at an outfall or point of discharge during dry weather screening, the inspector will systematically visually inspect the storm sewer system and surface until the source of the flow is identified. The source will be identified on the inspection forms.

**Measurability:** Copies of completed inspection forms, including a description of the remediation measures taken.

**Schedule:** The source investigation will be performed at the time of the inspection.

- 13. Provide the procedure for responding to illegal dumping/spills. The procedure shall include a schedule for responding to complaints, performing field observations, and follow-up field screening and source investigations as appropriate.**

**BMP:** The Township Water and Sewer Department or Facility and Grounds Department will be notified upon an illegal dumping/spill to the Township's MS4. The Water and Sewer Department will inspect the spill and an ERP Tracking Form will be completed. Larger dumping or spills will be remediated within 30 days.

**Measurability:** Number of illegal dumping/spills reported. Completed ERP Tracking Forms, including a description of the remediation measures taken.

**Schedule:** The Township Water and Sewer Department or Facility and Grounds Department will inspect a reported illegal dumping/spill upon notification. The Township's goal is one week to address minor dumping/spills. The Township will work proactively to address larger dumping/spills as soon as is reasonably practicable.

- 14. Provide the procedure for responding to illicit discharges upon becoming aware of such a discharge outside of the priority areas. The procedure shall include a schedule for performing field observations, and follow-up field screening and source investigations as appropriate.**

**BMP:** All of the Township owned MS4s are priority areas and will be addressed as described above. If the Township receives a report of an illicit discharge outside the Township's MS4, the discharge will be reported to the appropriate permittee or agency that has jurisdiction over the receiving MS4 or body of water.

**Measurability:** Number of illicit discharges reported, including a description of the remediation measures taken. Notification(s) to the permittees and agencies with jurisdiction.

**Schedule:** The Township Water and Sewer Department or Facility and Grounds Department will inspect a reported illicit discharge within the Township owned MS4s upon notification. Upon notification of an illicit discharge, the Township's goal is one week to address minor dumping/spills. The Township will work proactively to address larger illicit discharges as soon as is reasonably practicable. Permittees and agencies responsible for illicit discharges outside of the Township's MS4 will be notified as the Township is notified.

- 15. Provide the procedure that includes a requirement to immediately report any release of any polluting materials from the MS4 to the surface waters or groundwaters of the state, unless a determination is made that the release is not in excess of the threshold reporting quantities in the Part 5 Rules, by calling the appropriate MDEQ District Office, or if the notice is provided after regular working hours call the MDEQ's 24-Hour Pollution Emergency Alerting System [PEAS] telephone number: 800-292-4706.**

**BMP:** Releases of polluting materials from the Township's MS4 to the surface waters or groundwaters of the state, that exceed the threshold reporting quantities will be documented on the Township's ERP Tracking Form by the Water and Sewer Department or Facility and Grounds Department. Unless a determination is made that the release is not in excess of the threshold reporting quantities in the Part 5 Rules, the Township will immediately report any release of polluting materials from the MS4 to the surface waters or groundwaters of the state by calling the Michigan Department of Environment, Great Lakes, and Energy (EGLE)<sup>1</sup> number for reporting releases – during business hours at 586.753.3700 or, outside business hours, at the EGLE 24-Hour PEAS number 800.292.4706.

**Measurability:** Number of discharges reported.

**Schedule:** Immediately upon the Township Water and Sewer Department or Facility and Grounds Department becoming aware of the discharge.

- 16. If the procedures requested in Questions 8 through 14 do not accurately reflect the applicant's procedure(s), describe the alternative approach to meet the minimum requirements.**

No alternate approach is proposed.

- 17. Provide the procedure for responding to illicit discharges once the source is identified. The procedure shall include a schedule to eliminate the illicit discharge and pursue enforcement actions. The procedure shall also address illegal spills/dumping.**

**BMP:** The Township's MS4s are all located within Township properties. Therefore, the Township has the regulatory authority to enforce elimination of the illicit discharge. Once the Township Water and Sewer Department or Facility and Grounds Department has identified the source of the illicit discharge, including illegal spills/dumping, they will work to remediate the source.

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<sup>1</sup> On April 22, 2019, the MDEQ became EGLE; all non-quoted references to the agency will be EGLE.

**Measurability:** Number of illicit discharges remediated.

**Schedule:** Upon notification of an illicit discharge, the Township's goal is one week to address minor illicit discharges and dumping/spills. The Township will work proactively to address larger illicit discharges and dumping/spills within 30 days. If more time is needed to correct the violation the Township will provide a specific schedule to return to compliance.

18. Provide the program to train staff employed by the applicant on the following topics. The program shall include a training schedule for this permit cycle. It is recommended that staff be trained more than once per permit cycle.

- Techniques for identifying an illicit discharge or connection, including field observation, field screening, and source investigation.
- Procedures for reporting, responding to, and eliminating an illicit discharge or connection and the proper enforcement response.
- The schedule and requirement for training at least once during the term of this permit cycle for existing staff and within the first year of hire for new staff.

**BMP:** The Township will train maintenance staff with regard to the above described topics through instructional videos and/or classroom seminars.

**Measurability:** Number of staff trained. Educational program implemented.

**Schedule:** At least once during the term of the permit for existing staff, and within the first year of hire for new staff.

19. Provide the procedure for evaluating and determining the overall effectiveness of the [Illicit Discharge Elimination Program] IDEP. The procedure shall include a schedule for implementation. *Examples of evaluating overall effectiveness include, but are not limited to, the following: evaluate the prioritization process to determine if efforts are being maximized in areas with high illicit discharge potential; evaluate the effectiveness of using different detection methods; evaluate the number of discharges and/or quantity of discharges eliminated using different enforcement methods; and evaluate program efficiency and staff training frequency.*

**BMP:** The Township Water and Sewer Department or Facility and Grounds Department staff are responsible for enforcing and tracking the implementation of the IDEP. The Township Water and Sewer Department and Facility and Grounds Department will review the overall effectiveness of the program. The review will look at such items as effective notification of illicit discharges to the Township; ability to track sources of illicit discharges identified during screening; timing and effectiveness of remediation; and staff training frequency.

**Measurability:** Needed improvement measures identified (if any) and implemented.

**Schedule:** The overall effectiveness of the IDEP will be evaluated annually.

20. Provide the ordinance or regulatory mechanism in effect that prohibits non-storm water discharges into the applicant's MS4 (except the non-storm water discharges addressed in Questions 21 and 22).

**BMP:** The Township owns all properties that contain Township-owned MS4s. The Township does not have private systems or other MS4s entering into the Township's MS4s. Therefore, the Township has the existing regulatory authority as the sole owner and operator of the MS4 to prohibit non-storm water discharges into the MS4. If future storm water systems, which are not part of a Township-owned MS4, are constructed and discharge into the Township's MS4, a maintenance covenant will be obtained. The maintenance covenant will prohibit the discharge of non-storm water into the Township's MS4.

**Measurability:** Copy of executed maintenance covenants.

**Schedule:** Ongoing, as applicable.

21. Does the ordinance or other regulatory mechanism exclude prohibiting the discharges or flows from firefighting activities to the applicant's MS4 and require that these discharges or flows only be addressed if they are identified as significant sources of pollutants to waters of the State? The ordinance shall not authorize illicit discharges; however, the applicant may choose to exclude prohibiting the discharges and flows from firefighting activities if they are identified as not being significant sources of pollutants to waters of the state.

**BMP:** The Township prohibits non-storm water discharges into the applicant's MS4; however, prohibiting the discharges and flows from firefighting activities is excluded, as long as they are identified as not being significant sources of pollutants to waters of the state.

**Measurability:** Verification of impacts to waters of the state as a result of fire fighting activities within the Township's MS4s.

**Schedule:** Ongoing, as applicable.

22. Does the ordinance or other regulatory mechanism prohibit the following categories of non-storm water discharges or flows if identified as significant contributors to violations of Water Quality Standards? The ordinance shall not authorize illicit discharges; however, the applicant may choose to exclude prohibiting the following discharges or flows if they are identified as not being a significant contributor to violations of Water Quality Standards.

- a. Water line flushing and discharges from potable water sources
- b. Landscape irrigation runoff, lawn watering runoff, and irrigation waters
- c. Diverted stream flows and flows from riparian habitats and wetlands
- d. Rising groundwaters and springs
- e. Uncontaminated groundwater infiltration and seepage
- f. Uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits
- g. Foundation drains, water from crawl space pumps, footing drains, and basement sump pumps
- h. Air conditioning condensation
- i. Waters from noncommercial car washing
- j. Street wash water
- k. Dechlorinated swimming pool water from single, two, or three family residences. (A swimming pool operated by the permittee shall not be discharged to a separate storm sewer or to surface waters of the state without NPDES permit authorization from the MDEQ.)

**BMP:** The Township prohibits non-storm water discharges into Township MS4s; however, the Township will exclude prohibiting the discharges and flows from the following if they are identified as not being a significant contributor to violations of water quality standards:

- a. water line flushing and discharges from potable water sources
- b. landscape irrigation runoff, lawn watering runoff, and irrigation waters
- c. diverted stream flows and flows from riparian habitats and wetlands
- d. rising groundwaters and springs
- e. uncontaminated groundwater infiltration and seepage
- f. uncontaminated pumped groundwater, except for groundwater cleanups specifically authorized by NPDES permits
- g. foundation drains, water from crawl space pumps, footing drains, and basement sump pumps
- h. air conditioning condensation
- i. waters from noncommercial car washing
- j. street wash water

- k. dechlorinated swimming pool water from single-, two-, or three- family residences as long as they are identified as not being significant sources of pollutants to waters of the state. A swimming pool operated by the Township shall not be discharged to a separate storm sewer or to surface waters of the state without NPDES permit authorization from EGLE.

**Measurability:** Verification of impacts to waters of the state as a result of the above listed activities within the Township's MS4s.

**Schedule:** Ongoing, as applicable.

**23. Provide the ordinance or regulatory mechanism that regulates the contribution of pollutants to the applicant's MS4.**

**BMP:** The Township owns all properties that contain Township-owned MS4s. The Township does not have private systems or other MS4s entering into Township MS4s. Therefore, the Township has the existing regulatory authority as the sole owner and operator of the MS4 to regulate the contribution of pollutants to the MS4.

**Measurability:** Corrective measures taken to address pollutant contribution to MS4.

**Schedule:** Ongoing, as applicable.

**24. Provide the ordinance or regulatory mechanism that prohibits illicit discharges, including illicit connections and the direct dumping or disposal of materials into the applicant's MS4.**

**BMP:** The Township owns all properties that contain Township-owned MS4s. The Township does not have private systems or other MS4s entering into Township MS4s. Therefore, the Township has the existing regulatory authority as the sole owner and operator of the MS4 to prohibit illicit discharges, including illicit connections and the direct dumping or disposal of materials into the MS4.

**Measurability:** Corrective measures taken to address illicit connections identified during outfall and points of discharge dry weather screening inspection and reported dumping or disposal of material into the MS4.

**Schedule:** Ongoing, as applicable.

**25. Provide the ordinance or regulatory mechanism with the authority established to inspect, investigate, and monitor suspected illicit discharges into the applicant's MS4.**

**BMP:** The Township owns all properties that contain Township-owned MS4s. Therefore, the Township has the existing regulatory authority as the sole owner and operator of the MS4 to inspect, investigate, and monitor suspected illicit discharges into the MS4.

**Measurability:** Corrective measures taken to address illicit connections identified during outfall and points of discharge dry weather screening inspection and reported dumping or disposal of material into the MS4.

**Schedule:** Ongoing, as applicable.

**26. Provide the ordinance or regulatory mechanism that requires and enforces elimination of illicit discharges into the applicant's MS4, including providing the applicant the authority to eliminate the illicit discharge.**

**BMP:** The Township owns all properties that contain Township-owned MS4s. Therefore, the Township has the existing regulatory authority as the sole owner and operator of the MS4 to require and enforce the elimination of illicit discharges into the MS4.

**Measurability:** Corrective measures taken to address illicit connections identified during outfall and points of discharge dry weather screening inspection and reported dumping or disposal of material into the MS4.

**Schedule:** Ongoing, as applicable.

## Construction Storm Water Runoff Control Program

### 27. Is the applicant a Part 91 Agency?

The Township is not a Part 91 Agency. The Township relies on the Office of Macomb County Public Works Commissioner (OMCPWC) for Soil Erosion and Sedimentation Control Program enforcement.

### 28. Provide the procedure with the process for notifying the Part 91 Agency or appropriate staff when soil or sediment is discharged to the applicant's MS4 from a construction activity. The procedure shall allow for the receipt and consideration of complaints or other information submitted by the public or identified internally as it relates to construction storm water runoff control. For non-Part 91 agencies, consideration of complaints may include referring the complaint to the qualifying local Soil Erosion and Sedimentation Control Program as appropriate. Construction activity is defined pursuant to Part 21, Wastewater Discharge Permits, Rule 323.2102 (K). The applicant may consider as part of their procedure when and under what circumstances the Part 91 Agency or appropriate staff will be contacted.

**BMP:** The Township owns all properties that contain Township MS4s, and will have inspectors overseeing the construction activities associated with a Township facility. An inspector will verify that the soil erosion control measures are installed according to the approved soil erosion permit obtained through the OMCPWC. If soil or sediment is discharged into the Township MS4 during the construction, the inspector will instruct the contractor to remediate the soil erosion control deficiency or contact the OMCPWC for enforcement.

Private construction activities that discharge soil or sediment into the Township MS4 would have to be from adjacent developments to the Township properties. The Township requires all private developments obtain a Part 91 permit from the OMCPWC as part of the engineering plan review process. If the Township becomes aware of a soil or sediment discharge into the Township's MS4 through Township staff or from the public, the deficiency will be directed to the Township Water and Sewer Department or Facility and Grounds Department, one of whom will then contact the OMCPWC for enforcement of the Part 91 permit.

**Measurability:** Number of corrective measures taken.

**Schedule:** Ongoing, as applicable.

### 29. Provide the procedure for when to notify the MDEQ when soil, sediment, or other pollutants are discharged to the applicant's MS4 from a construction activity. Other pollutants include pesticides, petroleum derivatives, construction chemicals, and solid wastes that may become mobilized when land surfaces are disturbed. The applicant may consider as part of their procedure when and under what circumstances the MDEQ will be contacted.

**BMP:** If a construction activity discharges soil, sediment, or other pollutants to the Township MS4, EGLE will be notified. EGLE will also be notified if the pollutant leaves the Township MS4 through an outfall or point of discharge. The Township Water and Sewer Department or Facility and Grounds Department, or their representative, will be responsible for notifying EGLE.

**Measurability:** Notifications made to EGLE.

**Schedule:** Ongoing, as applicable.

30. Provide the procedure for ensuring that construction activity one acre or greater in total earth disturbance with the potential to discharge to the applicant's MS4 obtains a Part 91 permit, or is conducted by an approved Authorized Public Agency as appropriate. Note: For applicants that conduct site plan review, the procedure must be triggered at the site plan review stage.

**BMP:** Construction activities associated with Township properties require a consultant prepare an Engineering Site Plan. As part of the contract agreement, the consultant must obtain a Part 91 permit through the OMCPWC.

Private construction developments, adjacent to Township MS4s, and have potential to discharge to the Township MS4, must go through an Engineering Plan Review process. Obtaining all necessary permits, including a Part 91 permit through the OMCPWC, is a condition of the approval of the Engineering Plans.

**Measurability:** Number of permits obtained.

**Schedule:** Ongoing, as applicable.

31. Provide the procedure to advise the landowner or recorded easement holder of the property where the construction activity will occur of the State of Michigan Permit by Rule (Rule 323.2190).

**BMP:** At the time of the Engineering Plan Review, a review letter is prepared; a checklist of all applicable permits, including the Part 91 permit, is included with the letter. The review letter is addressed to the property owner and owner's design engineer. A copy of the checklist is attached in Appendix 8.

**Measurability:** Number of landowner or recorded easement holders notified.

**Schedule:** Ongoing, as applicable.

## Post-Construction Storm Water Runoff Program

32. Is an ordinance or other regulatory mechanism in effect to address post-construction storm water runoff from new development and redevelopment projects, including preventing or minimizing water quality impacts? The ordinance or other regulatory mechanism shall apply to private, commercial, and public projects, including projects where the applicant is the developer. This requirement may be met using a single ordinance or regulatory mechanism or a combination of ordinances and regulatory mechanisms.

Macomb County, in collaboration with Oakland, Wayne, and Livingston counties, is pursuing an alternate approach to address post-construction storm water requirements. Once the newly-developed post-construction storm water standards become available, Macomb Township will review them and decide whether they will adopt the County's standards or develop standards specific to Macomb Township.

33. Does the ordinance or other regulatory mechanism apply to projects that disturb at least one or more acres, including projects less than an acre that are part of a larger common plan of development or sale and discharge into the applicant's MS4?

The regulatory mechanism will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of a Township-specific standards.

34. Is the applicant the owner or operator of a federal facility with a storm water discharge?

Yes (skip to Question 36).

35. Is the applicant implementing the post-construction storm water runoff control requirements in Section 438 of the Energy Independence and Security Act? A guidance document is available at:

[http://www.epa.gov/greeningepa/documents/epa\\_swm\\_guidance.pdf](http://www.epa.gov/greeningepa/documents/epa_swm_guidance.pdf)

Not applicable.

**36. Does the ordinance or other regulatory mechanism include one or more of the following water quality treatment standards?**

The regulatory mechanism will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

**37. What is the source of the rainfall data if the applicant has chosen the water quality treatment standard of requiring the treatment of the runoff generated from 90 percent of all runoff-producing storms?**

EGLE memo, dated March 24, 2006, provides the 90% annual non-exceedance storm statistics. The memo is available at:

[http://www.michigan.gov/documents/deq/lwm-hsu-nps-ninety-percent\\_198401\\_7.pdf](http://www.michigan.gov/documents/deq/lwm-hsu-nps-ninety-percent_198401_7.pdf).

**38. Does the ordinance or other regulatory mechanism require that BMPs be designed on a site-specific basis to reduce post-development total suspended solids loadings by 80 percent or achieve a discharge concentration of total suspended solids not to exceed 80 milligram per liter?**

The regulatory mechanism will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

**39. Does the ordinance or other regulatory mechanism require that the post-construction runoff rate and volume of discharges not exceed the pre-development rate and volume for all storms up to the two-year, 24-hour storm at the project site? At a minimum, pre-development is the last land use prior to the planned new development or redevelopment. A spreadsheet to assist with these calculations is available at:**

[www.michigan.gov/documents/deq/wb-storm-MS4-RunoffVolume\\_331235\\_7.xls](http://www.michigan.gov/documents/deq/wb-storm-MS4-RunoffVolume_331235_7.xls)

No, the regulatory mechanism will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

**40. Does the ordinance or other regulatory mechanism exclude any waterbodies from the channel protection performance standard? The channel protection performance standard is not required for the following waterbodies: the Great Lakes or connecting channels of the Great Lakes; Rouge River downstream of the Turning Basin; Saginaw River; Mona Lake and Muskegon Lake (Muskegon County); and Lake Macatawa and Spring Lake (Ottawa County).**

Not applicable.

**41. Provide the procedure for reviewing the use of infiltration BMPs to meet the water quality treatment and channel protection standards for new development or redevelopment projects in areas of soil or groundwater contamination in a manner that does not exacerbate existing conditions. The procedure shall include the process for coordinating with MDEQ staff as appropriate.**

**BMP:** The Township properties will have Engineering Plans prepared by a consultant for new development or redevelopment projects. The consultant will consider the use of infiltration BMPs as part of the design, and will coordinate the design with the Township Water and Sewer Department and Township Engineering staff.

Private developments that will utilize the Township MS4 for storm water discharge will be evaluated for use of infiltration BMPs at the time of the Engineering Plan Review Process.

**Measurability:** Infiltration BMPs constructed for new development or redevelopment projects.

**Schedule:** Ongoing, as applicable.

42. Does the ordinance or other regulatory mechanism require BMPs to address the associated pollutants in potential hot spots as part of meeting the water quality treatment and channel protection standards for new development or redevelopment projects? Hot spots include areas with the potential for significant pollutant loading such as gas stations, commercial vehicle maintenance and repair, auto recyclers, recycling centers, and scrap yards. Hot spots also include areas with the potential for contaminating public water supply intakes.

The regulatory mechanism will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

43. Does the ordinance or other regulatory mechanism allow for the approval of off-site mitigation for redevelopment projects that cannot meet 100 percent of the performance standards on-site after maximizing storm water retention? Off-site mitigation refers to BMPs implemented at another location within the same jurisdiction and watershed/sewershed as the original project. A watershed is the geographic area included in a 10-digit Hydrologic Unit Code and a sewershed is the area where storm water is conveyed by the applicant's MS4 to a common outfall or point of discharge.

Not pursuing this option.

44. Does the ordinance or other regulatory mechanism allow for the approval of payment in lieu for projects that cannot meet 100 percent of the performance standards on-site after maximizing storm water retention? A payment in lieu program refers to a developer paying a fee to the applicant that is applied to a public storm water management project within the same jurisdiction and watershed/sewershed as the original project in lieu of installing the required BMPs onsite. The storm water management project may be either a new BMP or a retrofit to an existing BMP and shall be developed in accordance with the applicant's performance standards. A watershed is the geographic area included in a 10-digit Hydrologic Unit Code and a sewershed is the area where storm water is conveyed by the applicant's MS4 to a common outfall or point of discharge. (If "not pursuing this option" was selected for both Questions 43 and 44, skip to Question 52.)

Not pursuing this option.

45.–51. Skipped, as indicated in Item 44.

52. Are there any other exceptions to the performance standards, other than off-site mitigation and payment in lieu, being implemented or to be implemented during the permit cycle? The applicant shall demonstrate how the exception provides an equivalent or greater level of protection as the performance standards.

Any exceptions will be noted upon review of Macomb County's standards and Macomb Township's adoption of the standards or development of a Township-specific standards.

53. Does the ordinance or other regulatory mechanism include a requirement to submit a site plan for review and approval of post-construction storm water runoff BMPs?

A site plan with appropriate storm water design calculations will be required as part of the regulatory mechanism.

54. Provide the procedure for site plan review and approval.

The procedure will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

55. Provide the reference in the site plan review and approval procedure to the process for determining how the developer meets the performance standards and ensures long-term operation and maintenance of BMPs.

The procedure will be available after Macomb Township's review of Macomb County's new standards and the Township's adoption of those standards or the development of Township-specific standards.

**56. Does the ordinance or other regulatory mechanism require the long-term operation and maintenance of all structural and vegetative BMPs installed and implemented to meet the performance standards in perpetuity?**

The regulatory mechanism will require the long-term operation and maintenance of all structural and vegetative BMPs. The regulatory mechanism will be available after Macomb Township’s review of Macomb County’s new standards and the Township’s adoption of those standards or the development of Township-specific standards.

**57. Does the ordinance or other regulatory mechanism require a maintenance agreement between the applicant and owners or operators responsible for the long-term operation and maintenance of structural and vegetative BMPs installed and implemented to meet the performance standards?**

The post-construction storm water control regulatory mechanism will apply to Macomb Township owned properties. The Township will be the applicant and owner. An appropriate maintenance agreement will be developed and will be a requirement of the regulatory mechanism. The regulatory mechanism will be available after Macomb Township’s review of Macomb County’s new standards and the Township’s adoption of those standards or the development of Township-specific standards.

**58. Does the maintenance agreement or other legal mechanism allow the applicant to complete the following?**

Once the regulatory mechanism has been developed, it will allow the applicant to inspect the structural or vegetative BMP and perform the necessary maintenance or corrective actions.

**59. Provide the procedure for tracking compliance with a maintenance agreement or other legal mechanism to ensure the performance standards are met in perpetuity.**

A procedure for tracking compliance with a maintenance agreement will be available after Macomb Township’s review of Macomb County’s new standards and the Township’s adoption of those standards or the development of Township-specific standards.

**Pollution Prevention and Good Housekeeping Program**

**60. Provide an up-to-date inventory of applicant-owned or operated facilities and storm water structural controls with a discharge of storm water to surface waters of the state. The inventory shall include the location of each facility. Provide an estimate of the number of structural storm water controls throughout the entire MS4 for each applicable category below (e.g., 100 catch basins and 7 detention basins).**

Property Location	Structural Storm Water Controls
Macomb Township Civic Center 54111 Broughton Road Macomb, MI 48042	1 retention basin with permanent pool 26 catch basins
Macomb Township Fire Station #1 19925 23 Mile Road Macomb, MI 48042	5 catch basins.
Macomb Township Water and Sewer Department 51560 Card Road Macomb, MI 48042 <b>(Note: not in urbanized area and not regulated under this permit)</b>	One detention basin with permanent pool 16 catch basins
Macomb Township Fire Station #2 17800 21 Mile Road Macomb, MI 48044	3 catch basins

Property Location	Structural Storm Water Controls
Macomb Township Fire Station #3 47111 North Avenue Macomb, MI 48042	2 detention basins 10 catch basins
Macomb Township Fire Station #4 16820 25 Mile Road Macomb, MI 48042	5 catch basins Oversized storm sewer pipe acting as underground detention
Waldenburg Park 21 Mile Road, East of Romeo Plank Road	3 catch basins
Macomb Corners Park 25 Mile Road, East of Luchtman Road	2 nutrient separating baffle box BMP structures 58 catch basins
Pump Station #2 Southwest corner of North Avenue and 21 Mile Road	3 catch basins

61. Provide the location where an up-to-date map (or maps) is available with the location of the facilities and structural storm water controls identified in Question 60. The location of the facilities and structural storm water controls may be included on the storm sewer system map maintained for the IDEP.

**BMP:** The Township maintains record drawings at the Water and Sewer Department, which indicate the structural storm water controls at each Township property. Any new construction on Township property will require Record Plans, and will serve as the storm sewer system map.

**Measurability:** Maintain copies of existing maps. Update maps, as applicable.

**Schedule:** Ongoing, and as new construction is completed.

62. Provide the procedure for updating and revising the inventory in Question 60 and map (or maps) identified in Question 61 as facilities and structural storm water controls are added, removed, or no longer owned or operated by the applicant. A suggested timeframe for updating/revising the inventory and map(s) is 30 days following adding/removing a facility or structural storm water control.

**BMP:** Changes to the Township storm water controls requires a Record Plan for construction. These Plans are maintained at the Township Water and Sewer Department.

**Measurability:** Maintain copies of existing maps. Update maps, as applicable.

**Schedule:** Ongoing, and within 30 days of the completion of the record plans.

63. Provide the procedure for assessing each facility identified in Question 60 for the potential to discharge pollutants to surface waters of the state. The procedure shall include a process for updating and revising the assessment. A recommended timeframe for updating/revising the assessment is 30 days prior to discharging storm water from a new facility and within 30 days of determining a need to update/revise the facility assessment.

The applicant should consider the following factors when assessing each facility:

- Amount of urban pollutants stored at the site (e.g., sediment, nutrients, metals, hydrocarbons, pesticides, fertilizers, herbicides, chlorides, trash, bacteria, or other site-specific pollutants)
- Identification of improperly stored materials
- The potential for polluting activities to be conducted outside (e.g., vehicle washing)
- Proximity to waterbodies
- Poor housekeeping practices
- Discharge of pollutants of concern to impaired waters

**BMP:** Each facility is assessed by its use and the entity/department responsible for overseeing its operation. The Township Water and Sewer Department will review the Engineering Plans and discuss facility operations with the department responsible for each facility to determine the level of risk for pollutants to be discharged to the surface waters of the state.

**Measurability:** Level of risk for each facility.

**Schedule:** The assessment will be updated within 30 days prior to discharging storm water from the facility, and within 30 days of determining a need to update/revise the facility assessment.

- 64. Provide the list of prioritized facilities using the assessment in Question 63. Each facility shall be prioritized based on having the high, medium, or low potential to discharge pollutants to surface waters of the state. Facilities with the high potential for pollutant runoff shall include, but are not limited to, the applicant's fleet maintenance and storage yards. The applicant may submit a demonstration with a description of how the applicant's fleet maintenance and storage yard has the low potential to discharge pollutants to surface waters of the state.**

The facilities listed in Item 60 represent all the Township facilities. The Township Water and Sewer Department facility is the only facility with a maintenance garage and storage yard. This facility is not located within the urbanized area and is not regulated under the MS4 permit. Therefore, it is not included in this assessment.

The Macomb Corners Park has a storage shed for lawn equipment which has a medium potential for discharging pollutants to surface waters of the state. The remaining facilities listed in the table in Item 60 have a low potential for discharging pollutants to surface waters of the state.

- 65. Is a site-specific standard operating procedure (SOP) available identifying the structural and non-structural storm water controls implemented and maintained to prevent or reduce pollutant runoff at each facility with the high potential for pollutant runoff? The SOP shall be available at each facility with the high potential for pollutant runoff and upon request from the MDEQ. The SOP shall identify the person responsible for oversight of the facility. The MDEQ may request the submission of the SOP during the application review process.**

An SOP has not been prepared because the Township does not have a facility with a high potential for pollutant runoff located within the urbanized area of the Township.

- 66. – 69.**

Not Applicable.

- 70. Provide the procedure identifying the BMPs currently implemented or to be implemented during the permit cycle to prevent or reduce pollutant runoff at each facility with the medium and lower potential for the discharge of pollutants to surface waters of the state using the assessment and prioritized list in Questions 63 and 64.**

The BMPs currently implemented, or to be implemented, during the permit cycle at each of the Township facilities are listed and described below.

## **Spill Prevention, Control, and Cleanup**

### **Description**

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility, or as a part of municipal field programs, have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to issues when they occur, and minimize the discharge of pollutants to the environment.

## Suggested Protocols

### *Spill/Leak Prevention Measures*

- If possible, move material handling indoors, under cover, or away from storm drains or sensitive water bodies.
- Properly label all containers so the contents are easily identifiable.
- Berm storage areas such that if a spill or leak occurs, the material is contained.
- Cover outside storage areas either with a permanent structure or with a seasonal one, such as a tarp, so rain does not come into contact with the materials.
- Check containers (and any containment sumps) often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect all spilled liquids and properly dispose.
- Store, contain, and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow, or be washed into the storm drainage system, surface waters, or groundwater.
- Place drip pans or absorbent materials beneath all mounted taps, and at all potential drip and spill locations, during the filling and unloading of containers. Any collected liquids or soiled absorbent materials should be reused/recycled or properly disposed.
- For field programs, only transport the minimum amount of material needed for the daily activities, and transfer materials between containers at a municipal yard where leaks and spill are easier to control.
- If paved, sweep and clean storage areas monthly, do not use water to hose down the area unless all of the water will be collected and properly disposed.
- Install a spill control device (such as a tee section) in catch basins that collect runoff from any storage areas at which the materials stored are oil, gas, or other materials that separate from and float on water. This will allow for easier cleanup should a spill occur.
- If necessary, protect catch basins while conducting field activities so that if a spill occurs, the material will be contained.

### *Spill Response and Prevention*

- Identify key spill response personnel and train employees on who they are.
- Store and maintain appropriate spill cleanup materials in a clearly marked location near storage areas; and train employees to ensure familiarity with the site's spill control plan and/or proper spill cleanup procedures.
- Locate spill cleanup materials, such as absorbents, where they will be readily accessible (e.g., near storage and maintenance areas, on field trucks).
- If a spill occurs, notify the key spill response personnel immediately. If the material is unknown or hazardous, the local fire department may also need to be contacted.
- If safe to do so, attempt to contain the material and block the nearby storm drains to minimize the area impacted. If the material is unknown or hazardous, wait for properly trained personnel to contain the materials.
- Perform an assessment of the area where the spill occurred and the downstream area which could be impacted. Relay this information to the key spill response and clean up personnel.

### *Spill Cleanup Procedures*

- Small non-hazardous spills
  - Use a rag, damp cloth, or absorbent materials for general cleanup of liquids.
  - Use brooms or shovels for the general cleanup of dry materials.
  - If water is used, it must be collected and properly disposed. The wash water cannot be allowed to enter the storm drain.
  - Properly dispose any waste materials.
  - Clean or properly dispose any equipment used to clean up the spill.

- Large non-hazardous spills
  - Use absorbent materials for general cleanup of liquids.
  - Use brooms, shovels, or street sweepers for the general cleanup of dry materials.
  - If water is used, it must be collected and properly disposed. The wash water cannot be allowed to enter the storm drain.
  - Properly dispose any waste materials.
  - Clean or properly dispose any equipment used to clean up the spill.
- For hazardous or very large spills, a private cleanup company or Hazmat Team may need to be contacted to assess the situation and conduct the cleanup and disposal.
- Chemical cleanups of material can be achieved with the use of absorbents, gels, and foams. Remove the absorbent materials promptly and dispose according to regulations.
- If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be sent to a certified laundry (rags) or disposed as hazardous waste.

### *Reporting*

- Immediately report any spills to the identified key municipal spill response personnel.
- Report spills to EGLE during regular daytime business hours at 586.753.3700.
- Report spills in accordance with applicable reporting laws. Spills that pose an immediate threat to human health or the environment must be reported immediately to 911, the PEAS at 800.292.4706, and the National Response Center (NRC) at 800.424.8802.
- Spills that pose an immediate threat to human health or the environment may also need to be reported, within 24 hours, to the Local Emergency Planning Committee (LEPC), State Emergency Response Center (SERC), Michigan Department of Agriculture (MDA), various divisions of EGLE, and the Department of Labor and Economic Growth (DLEG).
- Federal regulations require that any oil spill into a water body, or onto an adjoining shoreline, be reported to the NRC at 800.424.8802 (24-hours a day, 7 days a week).
- After the spill has been contained and cleaned up, a detailed report about the incident should be generated and kept on file (see the section on Reporting). The incident may also be used in briefing staff about proper procedures.

## **Vehicle and Equipment Cleaning**

### **Description**

Wash water from vehicle and equipment cleaning activities performed outdoors, or in areas where wash water flows onto the ground, can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to storm water runoff. Use of the procedures outlined below can prevent or reduce the discharge of pollutants to storm water during vehicle and equipment cleaning.

### **Approach**

Reduce potential for pollutant discharge through source control pollution prevention and BMP implementation. Successful implementation depends on effective training of employees on applicable BMPs, and general pollution prevention strategies and objectives.

- Use properly maintained offsite commercial washing and steam cleaning businesses whenever possible. These businesses are better equipped to handle and properly dispose the wash waters.
- Good housekeeping practices can minimize the risk of contamination from wash water discharges.

## Suggested Protocols

- Use biodegradable, phosphate-free detergents for washing vehicles, as appropriate.
- Mark the area clearly as a wash area.
- Post signs stating that only vehicle washing is allowed in wash area, and that discharges to the storm drain are prohibited.
- Provide a trash container in wash area.
- Map onsite storm drain locations to avoid discharges to the storm drain system.
- Emphasize the connection between the storm drain system and runoff and help reinforce that car washing activities can have an effect on local water quality. This can be accomplished through storm drain stenciling programs.
- Design wash areas to properly collect and dispose wash water when engine cleaning is conducted, and when chemical additives, solvents, or degreasers are used. This may include installation of sumps or drain lines to collect wash water; construction of a berm around the designated area; and/or grading of the area to collect wash water as well as prevent storm water runoff.
- If washing/cleaning vehicles must occur onsite, washing vehicles and equipment will take place inside the Water and Sewer Department Maintenance Building. This will help to control the targeted constituents by directing them to the sanitary sewer.
- If washing or maintenance must occur onsite:
  - Use the Water and Sewer Department Maintenance Building. Designated wash areas must be well marked with signs indicating where and how washing must be done. This area is covered to collect the wash water and graded to direct the wash water to the sanitary sewer system.
  - Oil changes and other minor vehicle maintenance will be completed in the Water and Sewer Department Maintenance Building.
- Use hoses with nozzles that automatically turn off when left unattended.
- Perform pressure cleaning and steam cleaning offsite to avoid generating runoff with high pollutant concentrations. If done onsite, no pressure cleaning and steam cleaning should be conducted in areas designated as wellhead protection areas for public water supply.

### *Disposal*

- Consider filtering and recycling wash water.
- Discharge equipment wash water to the sanitary sewer.
- Discharge vehicle wash water to (1) the sanitary sewer, a holding tank, or process treatment system or (2) an enclosed recycling system.
- Discharge wash water to sanitary sewer only after contacting the local sewer authority to find out if pretreatment is required.

## Building and Grounds Maintenance

### Description

Storm water runoff from building and grounds maintenance activities can be contaminated with toxic hydrocarbons in solvents, fertilizers and pesticides, suspended solids, heavy metals, and abnormal pH. Utilizing the following protocols will prevent or reduce the discharge of pollutants to storm water from building and grounds maintenance activities by: washing and cleaning up with as little water as possible, following good landscape management practices, preventing and cleaning up spills immediately, keeping debris from entering the storm drains, and maintaining the storm water collection system.

## Approach

### *Pollution Prevention*

- Switch to non-toxic chemicals for maintenance when possible.
- Choose cleaning agents that can be recycled.
- Encourage proper lawn management and landscaping, including use of native vegetation.
- Encourage use of Integrated Pest Management techniques for pest control.
- Encourage proper onsite recycling of yard trimmings.
- Recycle residual paints, solvents, lumber, and other material as much as possible.

## Suggested Protocols

### *Pressure Washing of Buildings, Rooftops, and Other Large Objects*

- In situations where soaps or detergents are used, and the surrounding area is paved, pressure washers must use a wastewater collection device that enables collection of wash water and associated solids. A sump pump, wet vacuum, or similarly effective device must be used to collect the runoff and loose materials. The collected runoff and solids must be disposed properly.
- If soaps or detergents are not used, and the surrounding area is paved, wash water runoff does not have to be collected but must be screened. Pressure washers must use filter fabric or some other type of screen on the ground and/or in the catch basin to trap the particles in wash water runoff.
- If pressure washing on a grassed area (with or without soap), runoff must be dispersed as sheet flow as much as possible, rather than as a concentrated stream. The wash runoff must remain on the grass and not drain to pavement. Ensure that this practice does not kill grass.

### *Landscaping Activities*

- Do not apply any chemicals (insecticide, herbicide, or fertilizer) directly to surface waters, unless the application is approved and permitted by the state.
- Grass clippings, leaves, sticks, or other collected vegetation should be disposed as garbage or by composting. Do not dispose collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures on exposed soils.
- Check irrigation schedules so pesticides will not be washed away, and to minimize non-storm water discharge.

### *Building Repair, Remodeling, and Construction*

- Do not dump any toxic substance or liquid waste on the pavement, the ground, or toward a storm drain.
- Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work. Properly dispose collected material on a daily basis.
- Use a ground cloth or oversized tub for activities such as paint mixing and tool cleaning.
- Clean paint brushes and tools covered with water-based paints in sinks connected to sanitary sewers, or in portable containers that can be dumped into a sanitary sewer drain. Brushes and tools covered with non-water-based paints, finishes, or other materials must be cleaned in a manner that enables collection of used solvents (e.g., paint thinner, turpentine, etc.) for recycling or proper disposal.
- Use a storm drain cover, filter fabric, or similarly effective runoff control mechanism if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the work day; and accumulated dirty runoff and solids must be collected and disposed of before removing the containment device(s) at the end of the work day.
- If an excavation site needs to be de-watered, the water may need to be filtered before discharging to a catch basin or offsite. In which case, the water should be directed through hay bales and filter fabric or other sediment filters or traps.
- Store toxic material under cover with secondary containment during precipitation events, and when not in use. A cover would include tarps or other temporary cover material.

### *Mowing, Trimming, and Planting*

- Leaves, sticks, or other collected vegetation should be disposed as garbage by composting, or at a permitted landfill. Do not dispose collected vegetation into waterways or storm drainage systems.
- Use mulch or other erosion control measures when soils are exposed.
- Place temporarily stockpiled material away from watercourses and drain inlets, and berm or cover stockpiles to prevent material releases to the storm drain system.
- Consider an alternative approach when bailing out muddy water; do not put it in the storm drain, pour over landscaped areas instead.
- Use hand or mechanical weeding where practical.

### *Fertilizer and Pesticide Management*

- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides, and the training of applicators and pest control advisors.
- Follow manufacturers' recommendations and label directions. Pesticides must never be applied if precipitation is occurring or predicted. Do not apply insecticides within 100 feet of surface waters such as lakes, ponds, wetlands, and streams.
- Use less toxic pesticides that will do the job, whenever possible. Avoid use of copper-based pesticides if possible.
- Do not use pesticides if rain is expected.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Calibrate fertilizer distributors to avoid excessive application.
- Employ techniques to minimize off-target application of pesticides (i.e., spray drift), including consideration of alternative application techniques.
- Apply pesticides only when wind speeds are low.
- Work fertilizers into the soil rather than dumping or broadcasting them onto the surface.
- Irrigate slowly to prevent runoff, and then only as much as is needed.
- If fertilizer is spilled on pavement and/or sidewalk, clean these surfaces before applying irrigation water.
- Empty pesticide containers should be disposed according to the label instructions.
- Use up the pesticides. Rinse containers and use rinse water as product. Dispose any unused pesticide as hazardous waste.
- Implement storage requirements for pesticide products with guidance from the local fire department and County Agricultural Commissioner. Provide secondary containment for pesticides.

### *Inspection*

- Inspect irrigation system periodically to ensure the right amount of water is being applied and excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- Properly dispose all spill cleanup material.

## **Parking Area Maintenance**

### **Description**

Parking lots can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals into receiving waters through storm water runoff or non-storm water discharges. The following protocols are intended to prevent or reduce the discharge of pollutants from parking areas, and include using good housekeeping practices.

### **Approach**

#### *General*

- Keep parking and storage areas clean and orderly. Remove debris in a timely fashion.

### *Controlling Litter*

- Provide an adequate number of litter receptacles.
- Clean out and cover litter receptacles frequently to prevent spillage.
- Routinely sweep, shovel, and dispose litter in the trash.

### *Surface Cleaning*

- Use dry cleaning methods (e.g., sweeping or vacuuming) to prevent the discharge of pollutants into the storm water conveyance system.
- Establish a frequency of public parking lot sweeping, based on usage and field observations of waste accumulation.
- Parking lots will be swept by a commercial service.
- Sweep all parking lots at least once before the onset of the wet season.
- Dispose parking lot sweeping debris and dirt at a landfill.
- When cleaning heavy oily deposits:
  - Use absorbent materials on oily spots prior to sweeping or washing.
  - Dispose used absorbents appropriately.

### *Surface Repair*

- Pre-heat, transfer, or load hot bituminous material away from storm drain inlets.
- Apply concrete, asphalt, and seal coat during dry weather to prevent contamination from contacting storm water runoff.
- Cover and seal (with waterproof material or mesh) nearby storm drain inlets and manholes before applying seal coat, slurry seal, etc., where applicable. Leave covers in place until job is complete and all water from emulsified oil sealants has drained or evaporated. Clean any debris from these covered manholes and drains for proper disposal.
- To avoid runoff, use only as much water as necessary for dust control.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose collected material and absorbents properly.

### *Inspection*

- Have designated personnel conduct inspections of the parking facilities and associated storm water conveyance systems on a regular basis.

## **Salt Application**

### **Description**

The application of deicing materials, most commonly salts such as sodium chloride, can lead to water quality problems for surrounding areas. Salts, gravel, sand, and other materials are applied to parking areas to reduce the amount of ice during winter storm events. Salts lower the melting point of ice, allowing parking areas to stay free of ice buildup during cold winters. Sand and gravel increase traction on the road, making travel safer.

### **Approach**

During salt application, certain BMPs can produce significant environmental benefits. The amount of salt applied should be regulated to prevent over-salting of motorways and increasing runoff concentrations. The amount of salt applied should be varied to reflect site-specific characteristics, such as traffic concentration and proximity to surface waters. Calibration devices for spreaders in trucks aid maintenance workers in the proper application of road salts. Alternative materials, such as sand or gravel, should be used in especially sensitive areas.

### *Pollution Prevention*

- Use the minimum amount of salt needed to get the job done.
- Salt is purchased and picked up from the Macomb County Department of Roads as needed; it is not stored in bulk on Township property. Small commercially available bags of salt are stored within Township facilities or in covered buckets at doorways for hand placement on sidewalks at entryways to buildings.
- Establish "low salt and/or sand areas" near sensitive environments. Sand may be detrimental in areas sensitive to sedimentation, such as streams; and salt can impact water supply wells.
- Manually remove snow from driveways and sidewalks.
- Cleanup road grit as soon as possible.
- Consider road temperatures when determining the volume of salt to apply.
- Control the rate of spreading by equipping trucks with ground-speed sensors.

### **Suggested Protocols**

- Sensitive areas, such as public water supplies, lakes, and ponds, should be identified and made known to salt applicators.
- Ground-speed controllers should be used for all spreaders.
- Give salt time to work. Time plowing operations to allow maximum melting by salt, before snow is plowed off the highway.
- Know when to plow and reapply salt. The need for another salt application can be determined by watching melting snow kicked out behind vehicle tires. If the slush is soft and fans out like water, the salt is still working. Once the slush begins to stiffen and is thrown directly to the rear of vehicle tires, it is time to plow.

## **Landscape Maintenance**

### **Description**

Landscape maintenance activities include vegetation removal, herbicide and insecticide application, fertilizer application, watering, and other gardening and lawn care practices. Vegetation control typically involves a combination of chemical (herbicide) application and mechanical methods. All of these maintenance practices have the potential to contribute pollutants to the storm drain system. The major objectives of this BMP are to minimize the discharge of pesticides, herbicides, and fertilizers into the storm drain system and receiving waters; prevent the disposal of landscape waste into the storm drain system by collecting and properly disposing clippings and cuttings; and educating employees and the public.

### **Approach**

#### *Pollution Prevention*

- Implement an Integrated Pest Management (IPM) program. An IPM is a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools.
- Conduct appropriate maintenance (i.e., properly timed fertilizing, weeding, pest control, and pruning) to help preserve the landscapes' water efficiency.
- Consider grass cycling (grass cycling is the natural recycling of grass by leaving the clippings on the lawn when mowing. Grass clippings decompose quickly and release valuable nutrients back into the lawn).

### **Suggested Protocols**

#### *Mowing, Trimming, and Weeding*

- Whenever possible, use mechanical methods of vegetation removal (e.g., mowing with tractor-type or push mowers, hand cutting with gas or electric powered weed trimmers) rather than applying herbicides. Use hand weeding where practical.

- Avoid loosening the soil when conducting mechanical or manual weed control, this could lead to erosion. Use mulch or other erosion control measures when soils are exposed.
- Mulching mowers may be recommended for certain flat areas. Other techniques may be employed to minimize mowing, such as selective vegetative planting using low maintenance grasses and shrubs.

#### *Irrigation*

- Where practical, use automatic timers to minimize runoff.
- Irrigate slowly, or pulse irrigate, to prevent runoff and only irrigate as much as is needed.
- Apply water at rates that do not exceed the infiltration rate of the soil.

#### *Fertilizer and Pesticide Management*

- Utilize a comprehensive management system that incorporates IPM techniques.
- Follow all federal, state, and local laws and regulations governing the use, storage, and disposal of fertilizers and pesticides, and training of applicators and pest control advisors.
- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Do not use pesticides if rain is expected. Apply pesticides only when wind speeds are low (less than 5 miles per hour [mph]).
- Do not mix or prepare pesticides for application near storm drains.
- Prepare the minimum amount of pesticide needed for the job; use the lowest rate that will effectively control the pest.
- Employ techniques to minimize off-target application of pesticides (i.e., spray drift), including consideration of alternative application techniques.
- Fertilizers should be worked into the soil rather than dumped or broadcast onto the surface.
- Calibrate fertilizer and pesticide application equipment to avoid excessive application.
- If fertilizer is spilled on pavement and/or sidewalk, sweep these surfaces before applying irrigation water.

## **Drainage System Maintenance**

### **Description**

As a consequence of its function, the storm water conveyance system collects and transports urban runoff that may contain certain pollutants. Maintaining catch basins, storm water inlets, and other storm water conveyance structures on a regular basis will remove pollutants; prevent clogging of the downstream conveyance system; restore catch basins' sediment trapping capacity; and ensure the system functions properly hydraulically to avoid flooding.

### **Approach**

#### *Catch Basins/Inlet Structures*

- Municipal staff should inspect facilities on a bi-annual basis to ensure the following:
  - Immediate repair of any deterioration threatening structural integrity.
  - Cleaning before the sump is 40% full. Catch basins should be cleaned as frequently as needed to meet this standard.
- Keep accurate logs of the number of catch basins cleaned.
- Record the amount of waste collected.
- Store wastes collected from cleaning activities of the drainage system in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes with outflow into the sanitary sewer if permitted. Water should be treated with an appropriate filtering device prior to discharge to the sanitary sewer. If discharge to the sanitary sewer is not allowed, water should be pumped or vacuumed to a tank and properly disposed. Do not dewater near a storm drain or stream.

### *Illicit Connections and Discharges*

- During routine maintenance of conveyance system and drainage structures, field staff should look for evidence of illegal discharges or illicit connections:
  - Is there evidence of spills, such as paints, discoloring, etc.?
  - Are there any odors associated with the drainage system?
  - Record locations of apparent illegal discharges/illicit connections.
  - Track flows back to potential dischargers and conduct aboveground inspections. This can be done through visual inspection of upgradient manholes or alternate techniques, including zinc chloride smoke testing, fluorometric dye testing, physical inspection testing, or television camera inspection.
  - Once the origin of flow is established, require the illicit discharger to eliminate the discharge.

## **Waste Handling and Disposal**

### **Description**

It is important to control litter to eliminate trash and other materials in storm water runoff. Waste reduction is a major component of waste management and should be encouraged through training and public outreach. Management of waste once it is collected may involve reuse, recycling, or proper disposal.

### **Approach**

#### *Pollution Prevention*

- Reuse products when possible.
- Encourage recycling programs with recycling bins, used oil collection, etc.

### **Suggested Protocols**

- Include properly designed trash storage areas.
- Regularly inspect solid waste containers for structural damage. Repair or replace damaged containers as necessary.
- Do not fill waste containers with washout water, or any other liquid.
- Ensure that only appropriate solid wastes are added to the solid waste container.
- Certain wastes, such as hazardous wastes, appliances, fluorescent lamps, pesticides, etc. may not be disposed in solid waste containers. Take these items to an appropriate hazardous waste collection facility.
- Do not mix wastes; this can cause chemical reactions, make recycling impossible, and complicating disposal.

**71. Provide the procedure for prioritizing each catch basin for routine inspection, maintenance, and cleaning based on preventing or reducing pollutant runoff. The procedure shall include assigning a priority level for each catch basin and the associated inspection, maintenance and cleaning schedule based on preventing or reducing pollutant runoff. The procedure shall include a process for updating/revising the priority level for a catch basin giving consideration to inspection findings and citizen complaints. *A recommended timeframe for updating/revising the procedure is 30 days following the construction of a catch basin or a change in priority level.***

**BMP:** Each of the Township's regulated catch basins are located on Township properties identified as having a low potential for the discharge of pollutants. The Water and Sewer Department facility has the greatest potential to generate the most sediment, which is mitigated by regular cleaning of the basins and a wet detention basin. All catch basins will be inspected bi-annually according to the procedures identified in Item 70. This schedule will be reassessed upon identifying catch basins that are subject to frequent cleaning, and as new catch basins are constructed. Citizen complaints will be directed to the Township Water and Sewer Department for appropriate action.

**Measurability:** Results of inspection. Number of catch basins cleaned and volume of material removed. Documentation will be kept of citizen complaints and remediation efforts.

**Schedule:** Biannual inspection of catch basins; cleaning as-needed. Reassess inspection/cleaning schedule if catch basins are identified as requiring frequent cleaning, and as new catch basins are constructed.

**72. Provide the geographic location of the catch basins in each priority level using either a narrative description or map.**

**BMP:** All catch basins are mapped on Record Plans for each Township property. The plans are maintained at the Township Water and Sewer Department. Construction of new catch basins will require Engineering Plans prior to construction. Record Drawings will be required after construction is completed.

**Measurability:** Maintain and update Record Drawings at the Township Water and Sewer Department.

**Schedule:** Ongoing, as needed.

**73. Provide the procedure for inspecting, cleaning, and maintaining catch basins to ensure proper performance. Proper cleaning methods include ensuring accumulated pollutants are not discharged during cleaning and are removed prior to discharging to surface waters of the state. A compliance assistance document titled Catch Basin Cleaning Activities Guidance Document is available at:**

[http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance\\_216198\\_7.pdf](http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance_216198_7.pdf).

**BMP:** The procedure for inspecting, cleaning, and maintaining catch basins to ensure proper performance will be completed in accordance with Appendix 9 – Catch Basin Cleaning Activities Guidance Document. All regulated catch basins will be inspected on a bi-annual basis. Cleaning will also occur on a bi-annual basis if identified as necessary from the inspection.

**Measurability:** Number of catch basins cleaned, and volume of material removed.

**Schedule:** Bi-annually and as needed.

**74. Provide the procedure for dewatering, storage, and disposal of materials extracted from catch basins. A compliance assistance document titled Catch Basin Cleaning Activities Guidance Document is available at:**

[http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance\\_216198\\_7.pdf](http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance_216198_7.pdf).

**BMP:** The procedure for catch basin dewatering, storage, and disposal of material to ensure proper performance will be completed in accordance with Appendix 9 – Catch Basin Cleaning Activities Guidance Document. All regulated catch basins will be inspected on a bi-annual basis.

**Measurability:** Number of catch basins cleaned; volume of material removed; and location of sediment disposal.

**Schedule:** Bi-annually and as needed.

**75. Provide the procedure for inspecting and maintaining the structural storm water controls identified in Question 60, excluding the structural storm water controls included in an SOP as part of Question 65 and catch basins. The procedure shall include a description and schedule for inspecting and maintaining each structural storm water control and the process for disposing of maintenance waste materials. The procedure shall require that controls be maintained to reduce to the maximum extent practicable the contribution of pollutants to storm water. The procedure shall include a process for updating/revising the procedure to ensure a maintenance and inspection program for each structural storm water control. *A recommended timeframe for updating/revising the procedure is 30 days following the implementation of a new structural storm water control.***

**BMP:** Following is a schedule of inspection of the Township’s storm water structural controls:

Property Location	Structural Storm Water Controls	Maintenance Schedule
Macomb Township Civic Center 54111 Broughton Road Macomb, MI 48042	1 retention basin with permanent pool	Inspect bi-annually Clean if sediment levels effect infiltration or basin design performance
Macomb Township Fire Station 3 47111 North Avenue Macomb, MI 48042	2 detention basins	Inspect bi-annually Clean if sediment levels effect infiltration or basin design performance
Macomb Township Fire Station 4 16820 25 Mile Road Macomb, MI 48042	Oversized storm sewer pipe acting as underground detention	Inspect bi-annually Clean if sediment levels effect infiltration or basin design performance
Macomb Corners Park 25 Mile Road, east of Luchtman Road	2 nutrient separating baffle box BMP structures	Inspect nutrient separating baffle boxes annually Clean if sediment levels affect infiltration or basin design performance

This procedure and schedule will be updated within 30 days following the implementation of a new structural storm water control. Waste materials will be disposed in the same manner as the catch basin spoils, as described in Item 74.

**Measurability:** Summary of inspection; structural controls cleaned; and updates to the procedures and schedule.

**Schedule:** As described in the table above.

**76. Provide the procedure requiring new applicant-owned or operated facilities or new structural storm water controls for water quantity be designed and implemented in accordance with the post-construction storm water runoff control performance standards and long-term operation and maintenance requirements.**

**BMP:** New construction of Township-owned MS4s will be completed in accordance with the post-construction storm water runoff control performance standards, and long-term operation and maintenance requirements.

**Measurability:** Number of structural storm water controls for water quantity constructed and associated design standards.

**Schedule:** Ongoing and as needed.

**77. Provide the procedure with the assessment of the applicant’s operation and maintenance activities for the potential to discharge pollutants to surface waters of the state. The assessment shall identify all pollutants that could be discharged from each applicable operation and maintenance activity and the BMPs being implemented or to be implemented to prevent or reduce pollutant runoff. The procedure shall include a process for updating and revising the assessment. A suggested timeframe for updating/revising the assessment is 30 days following adding/removing BMPs to address new and existing operation and maintenance activities.**

**BMP:** The assessment of the pollutants that may be potentially discharged to surface waters of the state from Township operation and maintenance (O&M) activities is salt dissolved in snowmelt runoff. BMPs will be identified to prevent or reduce the pollutant runoff. These BMPs will include snow plow maps to minimize pollutant runoff to storm water outlets, appropriate salt application volumes, and alternatives to salt for deicing. This assessment will be revised as BMPs are added or removed.

**Measurability:** Updated assessment of Township O&M activities for the potential to discharge pollutants to surface waters of the state.

**Schedule:** Update/revise assessment 30 days following adding/removing BMPs.

**78. Provide the procedure for prioritizing applicant-owned or operated streets, parking lots, and other impervious infrastructure for street sweeping based on the potential to discharge pollutants to surface waters of the state. The procedure shall include assigning a priority level for each parking lot and street and the associated cleaning schedule (i.e., sweeping frequency and timing) based on preventing or reducing pollutant runoff. The procedure shall include a process for updating/revising the priority level giving consideration to street sweeping findings and citizen complaints. A recommended timeframe for updating/revising the prioritization is 30 days following the construction of a new street, parking lot, or other applicant-owned or operated impervious surface or within 30 days of identifying a need to revise a priority level.**

**BMP:** The procedure for street sweeping of applicant-owned or operated parking lots, and other impervious infrastructure, is discussed under Parking Area Maintenance in Item 70. The Township does not own or operate any streets in the Township. Each of the facilities that contain Township-owned parking areas have low potential to discharge pollutants to surface waters of the state. The Water and Sewer Department facility has the greatest potential for accumulating sediment and will be evaluated on a bi-annual basis for additional cleaning. Citizen complaints about the parking area will be directed to the Township Water and Sewer Department or Facility and Grounds Department; the Departments will assess the need for cleaning.

**Measurability:** Number of parking areas cleaned.

**Schedule:** Sweep each parking lot bi-annually. Respond to citizen complaints within one week. Update the prioritization within 30 days following the construction of a new parking lot, or other applicant-owned or operated impervious surface.

**79. Provide the geographic location of the streets, parking lots, and other impervious surfaces in each priority level using either a narrative description or map.**

**BMP:** The Township Water and Sewer Department maintains Record Plans of all Township-owned parking lots and other impervious surfaces. These drawings will serve as the maps requested in this Item.

**Measurability:** Maintain maps at Township Water and Sewer Department. Update maps as new construction is completed.

**Schedule:** Update maps within 30 days of new construction.

**80. Provide the procedure identifying the sweeping methods based on the applicant's sweeping equipment and use of additional resources in sweeping seasonal leaves or pick-up of other materials. Proper sweeping methods include operating sweeping equipment according to the manufacturers' operating instructions and to protect water quality.**

**BMP:** The procedure for street sweeping applicant-owned or operated parking lots, and other impervious infrastructure, is discussed under Parking Area Maintenance in Item 70. The Township does not own or operate any streets in the Township.

**Measurability:** Number of parking areas cleaned.

**Schedule:** Sweep each parking lot bi-annually. Respond to citizen complaints within one week. Within 30 days following the construction of a new parking lot, or other applicant-owned or operated impervious surface, the prioritization list will be updated.

81. Provide the procedure for dewatering, storage, and disposal of street sweeper waste material. A compliance assistance document titled Catch Basin Cleaning Activities Guidance Document is available at: [http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance\\_216198\\_7.pdf](http://www.michigan.gov/documents/deq/wb-stormwater-CatchBasinGuidance_216198_7.pdf).

**BMP:** The procedure for street sweeping applicant-owned or operated parking lots and other impervious infrastructure, including street sweeper waste material disposal, is discussed under Parking Area Maintenance in Item 70 above. The Township does not own or operate any streets in the Township.

**Measurability:** Material disposal method.

**Schedule:** Sweep each parking lot bi-annually. Respond to citizen complaints within one week. Update the prioritization within 30 days following the construction of a new parking lot, or other applicant-owned or operated impervious surface.

82. Provide the procedure requiring the applicant's pesticide applicator to be certified by the State of Michigan as an applicator in the applicable category, to prevent or reduce pollutant runoff from vegetated land. A description of the categories is located at: [http://www.michigan.gov/mdard/0,4610,7-125-1569\\_16988\\_35289-11992--,00.html](http://www.michigan.gov/mdard/0,4610,7-125-1569_16988_35289-11992--,00.html).

**BMP:** The Township uses a private contractor for the application of pesticides. Under the contract agreement, the pesticide applicator must be certified by the State of Michigan according to the applicable categories in the web link above.

**Measurability:** Verification of pesticide applicator's certification.

**Schedule:** Maintain verification annually.

83. Provide the procedure requiring contractors hired by the applicant to perform municipal operation and maintenance activities comply with all pollution prevention and good housekeeping BMPs as appropriate. The procedure shall include the process implemented for providing oversight of contractor activities to ensure compliance.

**BMP:** Contractors hired by the Township must sign and acknowledge they are aware and understand that their activities must comply with all pollution prevention and good housekeeping BMPs, as appropriate. A copy of the Contractor Acknowledgement Form is provided in Appendix 10. Construction projects with the greatest potential for pollution prevention discharges to waters of the State are inspected by a Township representative.

**Measurability:** Signed contractor acknowledgement forms. Inspection reports maintained at Township Water and Sewer Department and Facility and Grounds Department.

**Schedule:** As contracts are signed.

84. Provide the employee training program to train employees involved in implementing or overseeing the pollution prevention and good housekeeping program. The program shall include the training schedule. At a minimum, existing staff shall be trained once during the permit cycle and within the first year of hire for new staff.

**BMP:** Township Water and Sewer Department and Facility and Grounds staff responsible for overseeing the pollution prevention and good housekeeping programs will be trained using various methods which may include educational videos, onsite or offsite training, and educational materials.

**Measurability:** Number of employees trained.

**Schedule:** Once during permit cycle, and within the first year of hire for new staff.

## Total Maximum Daily Load Implementation Plan

### 85. Was a TMDL included in the applicant's application notice?

The *E. coli* TMDL was included for Deer Creek, Lake St. Clair Metropolitan and Memorial Beaches, as well as the Clinton River.

### 86. Provide the procedure for identifying and prioritizing BMPs currently being implemented or to be implemented during the permit cycle to make progress toward achieving the pollutant load reduction requirement in each TMDL identified in Question 85. The procedure shall include a process for reviewing, updating, and revising BMPs implemented or to be implemented to ensure progress in achieving the TMDL pollutant load reduction.

**BMP:** The Township has a low potential to contribute *E. coli* into the waters of the state. All Township-owned facilities are connected to sanitary sewer. The Township does own and operate two parks with trails and fields where dogs can be walked on a leash. The Township will maintain pet waste dispensers at the parks. The Macomb Township Civic Center, Macomb Township Water and Sewer Department Facility, Macomb Township Fire Stations 1, 2, 3, and 4, and Pump Station 2 will be evaluated for contributions of *E. coli* from waterfowl or other potential sources through site inspection. BMPs that will be considered include no-mow zone buffers and other methods to discourage use of the properties by waterfowl. As new construction of regulated Township facilities is completed, the need for additional BMPs will be evaluated.

**Measurability:** Updated list of BMPs implemented.

**Schedule:** Ongoing and as needed. Within 30 days of construction of new Township facilities.

### 87. Provide the list of prioritized BMPs currently being implemented or to be implemented during the permit cycle to make progress toward achieving the pollutant load reduction requirement in each TMDL identified in Question 85. Each BMP shall include a reference to the targeted TMDL pollutant.

**BMP:** The Township has a low potential to contribute *E. coli* into the waters of the state. All Township owned facilities are connected to sanitary sewer. The Township does own and operate two parks with trails and fields where dogs can be walked on a leash. The Township will maintain pet waste dispensers at the parks. The Macomb Township Civic Center, Macomb Township Water and Sewer Department Facility, Macomb Township Fire Stations 1, 2, 3, and 4, and Pump Station 2 will be evaluated for contributions of *E. coli* from waterfowl or other potential sources through site inspection. BMPs that will be considered include no-mow zone buffers and other methods to discourage use of the properties by waterfowl.

**Measurability:** Number of pet waste dispensers maintained.

**Schedule:** Ongoing and as needed.

### 88. Provide the monitoring plan for assessing the effectiveness of the BMPs currently being implemented, or to be implemented, in making progress toward achieving the TMDL pollutant load reduction requirement, including a schedule for completing the monitoring. Monitoring shall be specifically for the pollutant identified in the TMDL. Monitoring may include, but is not limited to, outfall monitoring, in-stream monitoring, or modeling. At a minimum, monitoring shall be conducted two times during the permit cycle or at a frequency sufficient to determine if the BMPs are adequate in making progress toward achieving the TMDL pollutant load reduction. Existing monitoring data may be submitted for review as part of the plan to meet part of the monitoring requirement.

**BMP:** The Township will collect one representative wet weather sample of a storm water discharge from the major discharge points discharging directly to surface waters of the state. Collection, storage, and sampling will be conducted according to the U.S. Environmental Protection Agency document [Improved Enumeration Methods for the Recreational Water Quality Indicators: Enterococci and Escherichia coli](#) (PDF format, 394 KB). The Township

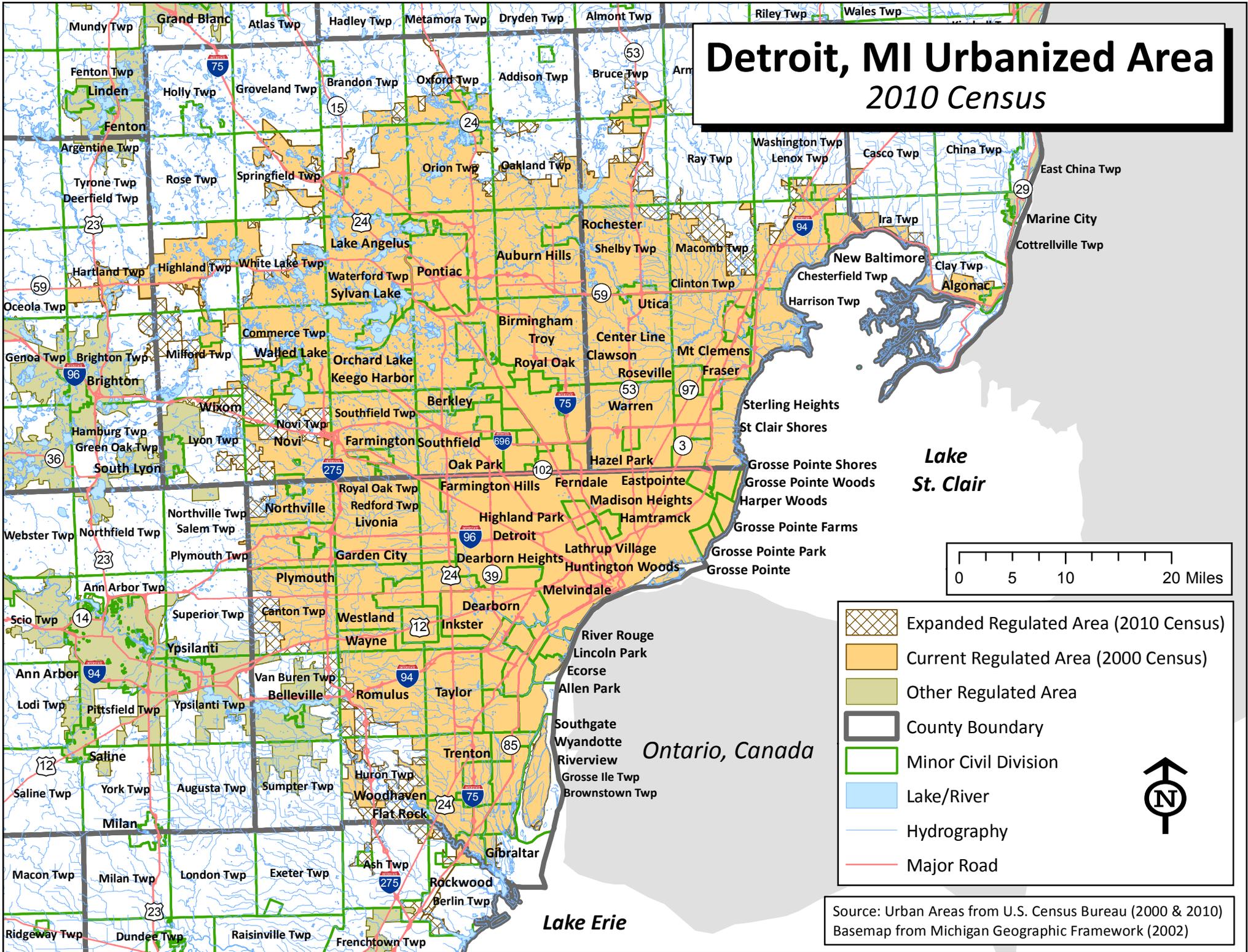
will be monitored twice during the permit cycle. The sites that will be sampled include Outfall 1 at the Macomb Township Civic Center, Outfall 7 at Waldenburg Park, and Outfall 8 at Macomb Corners Park. The samples will be collected within 30 to 60 minutes of the start of a wet weather event. A **wet weather event** is defined as a *precipitation event that produces at least 0.25-inches of rain over a 24-hour period.*

**Measurability:** Test sample results.

**Schedule:** Two times during permit cycle.

# Appendix 1

# Detroit, MI Urbanized Area 2010 Census



# Appendix 2

**Table 1 – Outfall and Point of Discharge Information**

Permit Application for Discharge of Storm Water to Surface Waters of  
the State from a Municipal Separate Storm Sewer System  
Macomb Township

Discharge Number	Facility	Outfall	Point of Discharge	Receiving Water
1	Macomb Township Civic Center	X		McBride Drain
2	Fire Station #1		X	Zander Drain
3	Water and Sewer Department		X	McBride Drain
4	Fire Station #2	X		Crittenden Drain
5	Fire Station #3	X		North Branch Clinton River
6	Fire Station #4		X	Middle Branch Clinton River
7	Waldenburg Park	X		Middle Branch Clinton River
8	Macomb Corners Park	X		McBride Drain
9	Pump Station #2		X	North Branch Clinton River

Note: The Water and Sewer Department building is located outside of the urbanized area and therefore not regulated under this permit.

# Appendix 3

# Macomb Township

## Storm Water Management Plan

### Enforcement Response Procedure Tracking Form



Date of Violation: \_\_\_\_\_

Name/Entity Responsible for Violation: \_\_\_\_\_

Location of Violation: \_\_\_\_\_

Description of Violation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Enforcement Response: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Scheduled Date for Resolving Violation: \_\_\_\_\_

Actual Date of Resolved Violation: \_\_\_\_\_

# Appendix 4

# **Clinton River Watershed Anchor Bay**

## **Lake St. Clair Direct Drainage**

**Collaborative Public Education Plan**

**Submitted by the Clinton River Watershed Council on behalf of  
Macomb County, Oakland County  
and the MS4 permit holders that participate in the  
Clinton River Watershed Council's Stormwater Education Program**

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## I. INTRODUCTION

This watershed wide Public Education Plan (PEP) was developed to inform the public within the Clinton River Watershed about their role in protecting water quality and preventing stormwater pollution. This plan was created by the municipalities and other partners in the Clinton River Watershed with the input of stakeholders, and professionals in the environmental education field. This plan outlines the public education goals and messages that must be communicated under the requirements of the National Pollutant Discharge Elimination System (NPDES) Phase I and Phase II regulations. The PEP also describes the existing and future efforts the communities and other partners will undertake to achieve these education goals, and how these efforts will be evaluated.

## II. PARTNERS & STAKEHOLDERS

This watershed wide PEP is submitted on behalf of Macomb County, Oakland County and the MS4 permit holders that participate in the Stormwater Education Program facilitated by the Clinton River Watershed Council (CRWC). Municipal staff, county agencies, and CRWC participated in the development of the PEP. The CRWC Stormwater Education program was developed to assist communities that must comply with the NPDES Phase I or Phase II stormwater discharge regulations. Activities facilitated by CRWC, Macomb and Oakland Counties, and the MSU Extension Office will be reported on behalf of the following permit holders and their nested MS4's.

Avondale Schools	Macomb County	Rochester
Center Line	Macomb Township	Rochester Hills
City of Village of Clarkston	Madison Heights	Rochester Schools
Clinton Township	Mount Clemens	Roseville *
Eastpointe *	New Baltimore*	Shelby Township
Fraser	New Haven *	Sterling Heights ( <i>Phase I</i> )
Grosse Pointe *	Oakland County	St. Clair Shores *
Grosse Pointe Park *	Oakland University	Sylvan Lake
Grosse Pointe Shores *	Orchard Lake	Troy
Grosse Pointe Farms *	Orion Township	Utica
Harrison Township	Oxford Township	Warren ( <i>Phase I</i> )
Hazel Park	Oxford Schools	Washington Twp.
Independence Twp	Oxford Village	
Keego Harbor	Pontiac	
Lake Orion Village	Romeo	

The \* indicate communities within the Lake St. Clair Shoreline Cycle 2015 Watersheds. PEP activities will be reported on a biennial basis as required by the permit.

Clinton River watershed communities, subwatershed groups and partners agreed that approaching stormwater education on a watershed, cross-jurisdictional basis is both cost-effective and environmentally sound. The watershed approach allows the partners to share information and resources to address stormwater concerns at their source. Similarly, developing and implementing a public education program on a watershed basis provides a consistent and effective mechanism for protecting water resources across the region, while leveraging financial resources in each community.

During preparation of this PEP, various municipal staff environmental organizations, county agencies, and the MSU Extension offices were contacted.

The following information was compiled in an effort to identify and organize existing stormwater education materials and programs:

- Existing materials or programs used to educate the public about watersheds and water quality protection (e.g. brochures, videos, displays, school programs, etc.).
- Existing audiences to target for watershed education (e.g. homeowners associations, lake associations, churches, civic groups, business associations, etc.).
- Existing communication methods that could be used to disseminate watershed education (e.g. cable access channel, email, website, newsletter, water bills, etc.).

### **III. CLINTON RIVER WATERSHED COUNCIL'S STORMWATER EDUCATION PROGRAM**

The Clinton River Watershed Council (CRWC) is a nonprofit organization dedicated to protecting, enhancing, and celebrating the Clinton River, its watershed, and Lake St. Clair. For over 40 years, CRWC has worked collaboratively with local governments, businesses, individuals, and other community groups to address water quality and land use issues in the watershed. Stormwater runoff is the leading source of pollution in the Clinton River today, thus CRWC's efforts are focused primarily on decreasing the amount of stormwater and stormwater pollution reaching our streams, rivers, and lakes. CRWC works to achieve its mission by providing education and stewardship programs to the more than 1.5 million people, 63 communities, and 4 counties in the Clinton River watershed.

Upon the request of a number of communities, CRWC developed the Stormwater Education Program to assist its members in meeting their Phase I or Phase II public education requirements. The components of the Stormwater Education Program are outlined in this PEP, along with materials and programs offered by the counties, CRWC, and MSU extension. These materials and programs will be supported and promoted by the MS4 permittees named in this PEP. In subscribing to the Stormwater Education Program, each participating entity has entered into contract with the watershed council. CRWC has agreed to provide the programs outlined in this plan.

As outlined in this PEP, CRWC's program includes the following major components:

- Education of the public and recruitment of volunteers in each subwatershed through a variety of outreach methods (presentations, workshops, websites, cable TV, print media, etc.).
- Regular volunteer training sessions and establishment of water quality monitoring sites throughout each subwatershed.
- Annual forums for sharing information, discussing issues, and planning projects.
- Coordination of other on-going education and stewardship efforts, including River Day, Weekly Clean, Clinton Clean-Up, and the Stream Leaders student river monitoring program.
- Development and distribution of supporting print and web-based materials.

#### **IV. GOALS & OBJECTIVES**

The goal of this PEP is to promote, publicize, and facilitate watershed education for the purpose of encouraging the public to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Pollution prevention shall be encouraged.

“Public” is defined to include all persons who potentially could affect the authorized stormwater discharges, including, but not limited to, residents, visitors to the area, public employees, businesses, industries, construction contractors and developers.

This PEP is designed to ensure that the targeted audiences (“public”) are reached with the appropriate messages for the following nine topics as required in the 2003 NPDES Phase II stormwater permit:

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 in 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.

In 2014, the Lake St. Clair Direct Drainage Communities were required to apply for a new permit. The following key messages will be covered within the Clinton River Watershed and Lake St. Clair Direct Drainage Collaborative Public Education Plan.

- A. Promote public responsibility and stewardship in the applicant’s watershed(s).
- B. Inform and educate the public about the connection of the MS4 to area waterbodies and the potential impacts discharges could have on surface waters of the state.

- C. Educate the public on illicit discharges and promote public reporting of illicit discharges and improper disposal of materials into the MS4.
- D. Promote preferred cleaning materials and procedures for car, pavement, and power washing.
- E. Inform and educate the public on proper application and disposal of pesticides, herbicides, and fertilizers.
- F. Promote proper disposal practices for grass clippings, leaf litter, and animal wastes that may enter into the MS4.
- G. Identify and promote the availability, location, and requirements of facilities for collection or disposal of household hazardous wastes, travel trailer sanitary wastes, chemicals, and motor vehicle fluids.
- H. Inform and educate the public on proper septic system care and maintenance, and how to recognize system failure.
- I. Educate the public on, and promote the benefits of, green infrastructure and Low Impact Development.
- J. Promote methods for managing riparian lands to protect water quality.
- K. Identify and educate commercial, industrial, and institutional entities likely to contribute pollutants to stormwater runoff.

**V. REQUIRED ELEMENTS –EDUCATION ACTIVITIES**

Appendix A details the activities and methods that the **Clinton River Watershed Council, Macomb County, Oakland County, and MSU extension will perform on behalf of the participating communities.** The matrix breaks out the activities according to the elements and key messages that they address and describes the target audiences, delivery mechanisms, timeline, responsible parties, and evaluation methods for each activity. An overall evaluation plan is also included in Section VI.

**VI. EVALUATION PLAN**

A variety of mechanisms will be employed. Some will quantify the usage of materials (e.g. number of materials distributed, website hits) and participation in events (e.g. number of attendees at a presentation or workshop, number of participants at an event). These mechanisms can be useful in determining whether the education effort is reaching the audience; however it is difficult to evaluate behavior change resulting from the education activity using these purely quantitative methods.

The Clinton River Watershed Council will use an online survey tool to measure post contact behavioral changes. For example; email addresses will be collected from all CRWC facilitated event attendees, 60-90 days following the event an email with a link to the online survey will be sent asking the participant some questions about their general knowledge and behavior changes. While the surveys are not scientifically significant the results of the survey can help mold the Public Education Efforts throughout the Clinton.

Through CRWC’s Adopt-A-Stream monitoring program, it is possible to evaluate long-term changes in water quality. The results are compiled in an annual scorecard, which allows a

simple mechanism for measuring improvements or declines in water quality across the various subwatersheds. Improvements in water quality cannot be attributed solely to a successful public education effort, but indicate the overall effectiveness of the stormwater management efforts in the community, subwatershed, and watershed-wide.

## **VII. REPORTING**

The Clinton River Watershed Council will provide a yearly Progress Report on this Public Education Plan to the Michigan Department of Environmental Quality.

## **VIII. APPENDIX A: ACTIVITIES AND DETAILED MATRIX**

## **IX. APPENDIX B: LETTERS OF COMMITMENT FOR SERVICES AND PROGRAMS**

1. Macomb County Public Works Office
2. MSU Extension
3. Oakland County Water Resource's Commissioners Office

# **Appendix 5**

Clinton River East Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	Key Message(s) Addressed											FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
					PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E - Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education			
					Green =High Priority Orange= Medium Priority Yellow= Low Priority													
Watershed Wide Activities																		
A-C, G, I-K	Regional Stormwater Summit	This annual event, which debuted in 2013, features presentations on stormwater and watershed initiatives in the southeast Michigan and the Great Lakes region that are relevant in helping communities work together and gain insight into addressing the region's stormwater and watershed management challenges.	YES	Citizens including the general public and county and municipal employees	x	x	x				x		x	x	x	Annually in the Fall (September/October)	Oakland	Achieve 100 participants annually from southeast MI
A-C, E-G, I, J	Michigan Green Schools Program	This program was signed into law at the state level in 2006. The program encourages public and private schools to participate in energy savings and environmental activities to be designated as "Michigan Green Schools".	YES	K-12th grade students and teachers	x	x	x		x	x	x		x	x		Annually	Oakland Macomb CRWC	Achieve 175 Schools from Oakland County and 135 from Macomb County annually
A-G, I, J	River Day	CRWC will recruit, host and promote events. Macomb County will sponsor River Day events. Oakland County will host and/or participate in Clean Up Events as staff time allows. All parties including MS4 permittees will promote River Day events.	YES	Citizens including the general public and county and municipal employees	x	x	x	X	x	x	x		x	x		Annually	Oakland Macomb CRWC SEMCOG	Achieve a minimum of 45 events annually
A,B,C,J, K	Clinton Cleanup	CRWC will recruit, host and promote events. Macomb County will sponsor Clinton Clean Up events. All parties including MS4 permittees will promote Clinton Clean Up events. Recruitment of volunteers is targeted to commercial, industrial and corporate partners.	YES	Citizens including the general public and county and municipal employees	x	x	x							x	x	Annually In September	Oakland Macomb CRWC	Host a minimum of 12 events annually 150 volunteers and 150 bags of trash removed.
A,B,C,J, K	Weekly Clean	CRWC will recruit, host and promote weekly clean up in the watershed. Recruitment of volunteers is targeted to commercial, industrial and corporate partners.	YES	Citizens including the general public and corporate and employees	x	x	x							x	x	50 weeks a year	CRWC	Host a minimum of 40 events annually with 400 volunteers and 300 bags of trash removed or about 17,000 lbs.
A-G, I, J	School Program - Clinton River Water Festival at Oakland University	Participate in the Clinton River Water Festival at Oakland University, providing staff for event planning, registration, volunteer guiding and presentations as funding and staff time permits. This water festival educates students in the Oakland County portion of the Clinton River watershed.	YES	4th-5th grade students, teachers, and chaperones	x	x	x	x	x	x	x		x	x		Annually in May	Oakland Macomb CRWC	Maintain a level of 1100 students per year plus 150 adults chaperones and teachers and 100 volunteers.
A-G, I, J	School Program - Lake St. Clair Water Festival at Macomb Community College	Participate in the Lake St. Clair Water Festival, providing staff for presentations as funding and staff time permits. This water festival educates students in the the the Clinton River, Lake. St. Clair Anchot Bay watersheds. Macomb County and CRWC will co-sponsor the Lake St. Clair Water Festival.	YES	4th-5th grade students, teachers, and chaperones	x	x	x	x	x	x	x		x	x		Annually in May	Oakland Macomb CRWC	Maintain a level of 1500 participants.
A-J	Subwatershed Advisory Group Participation	Attend subwatershed advisory group (SWAG) meetings in support of local watershed planning and implementation efforts. CRWC facilitates the Upper, Main and Stony/Paint SWAGS. Macomb County facilitates the Lake St. Clair, North Branch, Clinton River East and Red Run SWAGS. WRC staff facilitates the Upper Huron/Kent Lake SWAG.	YES	County and Municipal Employees and NGO Staff, all MS4 permittees	x	x	x	x	x	x	x	x	x	x		Annually	Oakland Macomb CRWC	Meet a minimum of three times a year

Clinton River East Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education	FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
A-K	Stormwater Education: Community Presentations and Workshops	Presentation on watersheds, stormwater pollution, and personal actions. (CRWC will host a minimum of 2 in each subwatershed.) Topics will vary and will be based on host subwatershed requests. CRWC will communicate with webmasters and communication staff of the MS4 permittees community to ensure promotion of events.	YES	Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland Macomb CRWC	Minimum 12 per year(2 per subwatershed)
A,B,C,J	Adopt-A-Stream Training Workshops	Adopt A Stream training includes one 3-hour workshop on watersheds, stormwater pollution, personal actions, and training in volunteer monitoring procedures including macroinvertebrate collection and physical assessment. (Minimum of one 3 hr workshop per subwatershed ) Bug Identification Workshops are also held in ensure that each team has at least one bug certified member . A minimum of 2 bug ID trainings held per year.	YES	Citizens including the general public and county and municipal employees	x	x	x							x		Annually	CRWC	Minimum 6 per year(1 per subwatershed)
A,B,C,J	Adopt-A-Stream Volunteer Water Quality Monitoring Program	Coordination of volunteer monitoring teams at pre-selected sites. Twice yearly volunteer appreciation picnic.	YES	Citizens including the general public and county and municipal employees	x	x	x							x		Biannually	CRWC	Monitor a minimum of 35 locations, with a minimum of 150 on the first Saturday in May and the first Saturday in October.
A-K	Subwatershed Website	Hosted by CRWC website; features subwatershed map, photos, description, events and links to education resources.	YES	Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Continuous	CRWC	Continue to maintain page and update information and verify participating communities links to this website.
A-C,E,F,I,J	Stream Leaders Student River Monitoring Program	Program is coordinated and implemented by CRWC following similar protocols as Adopt-A-Stream (also includes chemical analysis).	YES	K-12th grade students, teachers and chaperones	x	x	x		x	x		x				Program is continous however actual monitoring is in May and Oct of each year.	CRWC	Retain 4,000 students per year in the program with 35 teachers.
<b>Macomb County Specific Activities</b>																		
A-K	MCPWO Student Presentations	Macomb County Public Works Office offers <i>Recycle Macomb!</i> , <i>Pollution Solutions!</i> and <i>Water &amp; the Urban Environment!</i> 3rd-12th grade students and adult groups. These presentations educate citizens on pollution prevention, recycling, proper hazardous waste disposal, environmental stewardship, functions of wells, septic systems, and storm drains.	YES	Adult groups and Macomb County 2nd-12th grade students	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	30 presentations per year and increase student knowledge.
A-K	MCPWO On-Site Water Quality Presentation	Macomb County Public Works Office sponsors presentations on watershed management challenges of the Clinton River and Lake St. Clair Watersheds, what communities are doing to address the problems and what individuals can do. Presentations are held at the property surrounding the MCPWO building.	YES	General Public within the Watershed	x	x	x	x	x	x	x	x	x	x	x	Annually	Macomb	Engage 20 participants per year.
A,B,C,G	Household Hazardous Waste Collection Days	Macomb County will promote proper hazardous waste disposal and sponsor collection drop-off sites.	YES	Macomb County Residents	x	x	x				x					Annually	Macomb	Host six events per year resulting in 3,500 participating residents and 200,000 pounds collected annually
A-G, J	Environmental Education Calendar	Macomb County will promote & sponsor a 3rd grade drawing/calendar contest.	YES	Macomb County Residents, business owners, students, educators	x	x	x	x	x	x				x		Annually	Macomb	Distrbute 5000 calendars
A,B,G	Imagine The Possibilities Recycling Contest	Macomb County will promote and sponsor, "Imagine the Possibilities Contest", a 4th grade recycling contest.	YES	Elementary students, educators, and residents	x	x					x					Annually	Macomb	Recruit 200 student entries

Clinton River East Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education	FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
A,B,J	Tributary Signage at Road and River Crossings	Macomb County will promote Report-A-Polluter hotline with hotline phone number posted on signs placed at roadway/waterway crossings.	YES	Homeowners, visitors, and business owners within Macomb	x	x								x		Annually	Macomb	10 signs per year
	<b>Oakland County Specific Activities</b>																	
A-K	Bulletin Boards	Bulletin boards in the WRC Public Works Building main lobby and framed posters in the vestibule of the WRC Water and Sewer Billing Office in Waterford are posted with information developed by the Southeast Michigan Partners for Clean Water on the "Seven Simple Steps to Clean Water" topics. Other related information is posted and/or materials are placed on the front desk of the Public Works Building main lobby for the public/county employees to take.	YES	General public, CVTs, county employees within Oakland County	x	x	x	x	x	x	x	x	x	x		Monthly	Oakland	Topics posted are tracked in an excel spreadsheet available upon request. Topics posted will be reported annually
A-C E-G, I	Dirt Doctors Program	The Dirt Doctors Program is an interactive program facilitated by WRC staff geared towards 4th and 5th grade students and teaches youth about how individual actions affect our waterways. The program focuses on the importance of soil erosion prevention and watershed stewardship.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x		x	x	x		x			Annually	Oakland	Minimum of 25 programs annually
A-C, H	Drain Detectives Program	The Drain Detectives Program is an interactive program facilitated by WRC staff geared towards 4th through 12th grade students. It teaches students how pollution can get into our waterways, what to look for, how to detect it and how to trace the source of the pollution. Students learn how they can help prevent pollution and how to report pollution incidents through Oakland County's 24-Hour Pollution Hotline. Students also learn how water and pollution travel through the watershed.	YES	Oakland County 4th-12th grade students, teachers and chaperones	x	x	x					x				Annually	Oakland	Minimum of 5 programs over the permit cycle
A-J	Enviroscape Watershed Model Program	The Enviroscapes watershed model teaches students about watersheds and how individual actions affect our waterways, as well as how pollution moves throughout a watershed. Students are taught how to prevent pollution through everyday actions. The model is programming is facilitated by WRC staff The Enviroscapes is also made available to the public to borrow for presentations.	YES	General public, Oakland County students	x	x	x	x	x	x	x	x	x	x		Annually	Oakland	Minimum of 10 programs annually
A-C, G, I, J	E-newsletter Articles	WRC releases an electronic newsletter to the public, CVTs, elected officials and county employees on a quarterly basis (the E-newsletter has taken the place of the WRC Watermark newsletter). This newsletter keeps Oakland County communities informed on the many projects and services provided by the WRC and highlights some of the WRC's ongoing projects and services. It also provides updates about the evolving role of the WRC office.	YES	General public, CVTs, elected officials, and county employees in Oakland County	x	x	x				x		x	x		Published quarterly	Oakland	Minimum of 4 newsletters annually
A-K	Household Hazardous Waste Information	Continue to publicize information on the NO HAZ, Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) and Southeastern Oakland County Resource Recovery Authority (SOCRRA) programs to citizens and employees of Oakland County on WRMD's Web site (www.oakgov.com/waste/nohaz). NO HAZ, RRRASOC and SOCRRA provide safe disposal of household hazardous waste to Oakland County municipalities to the maximum extent practicable (as budget allows). The WRC will continue to distribute HHW brochures. WRC also provides an ad on household hazardous waste disposal in the Oakland Lakefront magazine and has information in its Waterfront Wisdom publication and on their Web site at www.oakgov.com/riparian.	YES	Residents	x						x					Annually	Oakland	Maintain working links to Web sites Hold a minimum of four collection events per year Collect and properly dispose of a minimum of 200,000 pounds of household hazardous waste per year
A-K	Kids' Clean Water Calendar Contest	The Kids' Clean Water Calendar contest is open to all 4th and 5th grade students in all schools within Oakland County. Themes for drawing entries surround the Seven Simple Steps to Clean Water campaign topics developed by SEMCOG. The contest promotes the students to learn about watershed stewardship and how our daily actions impact our waterways.	YES	General public, Oakland County 4th and 5th grade students	x	x	x	x	x	x	x	x	x	x		Annually	Oakland	Achieve participation of a minimum of 600 students per year Distribute a minimum of 5,000 calendars per year throughout Oakland County

Clinton River East Table 2

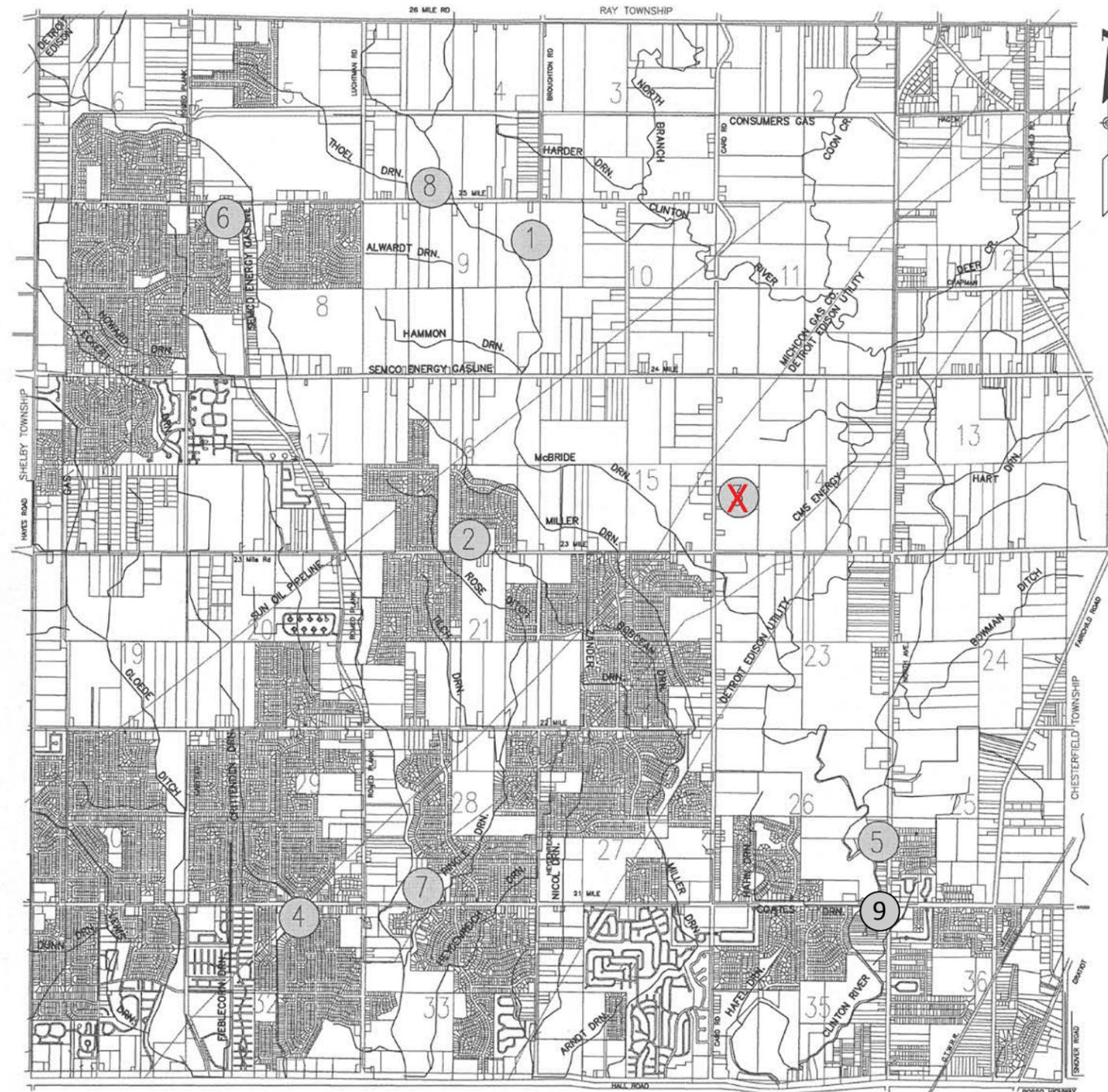
PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education	FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
A, I, J	Natural Resources Education Program	Special programs are offered by Oakland County Parks and Recreation Commission (OCPRC) staff throughout the year which provide opportunities for the community to participate in ongoing stewardship efforts. Programs take place at the Oakland County Parks as well as other locations in Southeast Michigan. Stewardship opportunities are posted on OCPRC's Web site at: <a href="http://www.destinationoakland.com">www.destinationoakland.com</a>	YES	General public, visitors to the area	x								x	x		Annually	Oakland	Hold a minimum of 20 stewardship events per year with participation from a minimum of 200 individuals per year
A-K	Oakland County Environmental Stewardship and Water Resource Web sites	WRC, Oakland County Planning and Economic Development Services (OCPEDS), Road Commission of Oakland County (RCOC), OCPRC and MSU-Extension Oakland County maintain environmental stewardship and/or water resource information on their Web sites at: <a href="http://www.oakgov.com/es">www.oakgov.com/es</a> , <a href="http://www.oakgov.com/riparian">www.oakgov.com/riparian</a> , <a href="http://www.destinationoakland.com">www.destinationoakland.com</a> , <a href="http://www.rcocweb.org/Environmental/Environmental.aspx">http://www.rcocweb.org/Environmental/Environmental.aspx</a> , and <a href="http://www.oakgov.com/msu/">http://www.oakgov.com/msu/</a> . Information will also be provided via the Be Phosphorus Smart! Web site, which is a portal to information on phosphorus and its role in and impacts on crops, turf and lawn care, and stormwater ( <a href="http://www.bephosphorusmart.msu.edu/">http://www.bephosphorusmart.msu.edu/</a> )	YES	General public, CVTs, county employees	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland MSUE Oakland	Provide working links to Web sites
A	Oakland Lakefront Magazine Advertisements	Public education messages are placed in the Oakland Lakefront magazine. The messages include pet care, fertilizers, household hazardous waste disposal, earth-friendly landscaping, car care and storm drain awareness. Oakland Lakefront is published monthly and reaches approximately 17,000 homeowners on the waterways of Oakland County.	YES	General public, riparian landowners	x	x	x	x	x	x	x	x	x	x	x	April through September	Oakland	Place six (6) ads per year Reach a minimum of 13,000 lakefront residents per ad per year
A-K	Publicize Environmental-Related Events	Publicize environmental stewardship and other relevant environmental activities to WRC staff and the general public through in-house bulletin boards in WRC lobby. Oakland County also has a Web portal where this information is available at: <a href="http://www.destinationoakland.com">www.destinationoakland.com</a> .	YES	General Public, visitors to the area, WRC staff	x											Annually	Oakland	Publicize a minimum of 20 natural-resource related events per year Maintain working links to Web sites
G	Recreational Vehicle Waste Dumpsites	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region on Southeast Michigan Council of Government's (SEMCOG) <i>Ours to Protect</i> Web site at: <a href="http://www.semco.org/OursToProtect_HouseholdWaste.aspx">www.semco.org/OursToProtect_HouseholdWaste.aspx</a> and provide a link to Michigan RV dump sites ( <a href="http://www.rvdumps.com/mi.htm">www.rvdumps.com/mi.htm</a> ) on Oakland County Waste Resource Management Division's Web site at: <a href="http://www.oakgov.com/waste/">www.oakgov.com/waste/</a> .	YES	Residents, visitors to the area						x						Annually	Oakland	Provide working links to Web sites
A-K	Riparian Information Distribution	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) at events, meetings, and through mailings. Maintain WRC's riparian education Web site ( <a href="http://www.oakgov.com/riparian">www.oakgov.com/riparian</a> )	YES	General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x	x	Annually	Oakland	Maintain working links to Web sites Distribute a minimum of 100 Waterfront Wisdom booklets per year
A, G	Solid Waste Plan	Continue to implement Oakland County's Solid Waste Plan which establishes an enforceable program and processes that when implemented will minimize future adverse impacts upon public health, the environment and the landscape as a result of the generation, handling, processing and disposal of Act 451, Part 115 non-hazardous solid wastes.	YES	Residents	x						x					Annually	Oakland	Provide working link to Web site
<b>Community Specific Activites</b>					<b>These items are to be reported by the communities in the SWMP not all items will be implmented by each community.</b>													
A-J	Presentations and Displays	Provide displays and presentations for water quality-related events upon request and availability of staff time display to public at least once in the next 5 years.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x		Quinquennially	MS4 Permittees	Host display once in during permit cycle
A-K	Regional Public Education Materials	Distribute resources available from SEMCOG including: Seven Simple Steps to Clean Water brochures, tip cards and kids activity sheets. Topics include: fertilizer, car care, pet care, household hazardous waste disposal, earth-friendly landscaping, water conservation and storm drain awareness. Materials are available on the Ours to Protect Website. at <a href="http://www.semco.org/ourstoprotect.aspx">http://www.semco.org/ourstoprotect.aspx</a>		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees	Distribute pamphlets on various topics at community facilities and events.

Clinton River East Table 2

PEP TOPIC	BMP IDENTIFIER	BMP DESCRIPTOR	PARTNER COLLABORATION	Target Audience	PEP Element A - Personal Watershed Stewardship	PEP Element B - Ultimate Storm Water Discharge Locations and Potential Impacts	PEP Element C - Public Reporting of Illicit Discharges	PEP Element D - Car, Pavement PowerWashing	PEP Element E- Pesticides, Herbicides, Fertilizer Education	PEP Element F-Grass Clippings, Leaf Litter, Animal Waste Disposal	PEP Element G - Waste Management Assistance	PEP Element H- Septic System Maintenance	PEP Element I - Benefits of Green Infrastructure LID	PEP Element J - Mgt. of Riparian Lands	PEP Element K - Commercial, Industrial, Institutional Education	FREQUENCY	RESPONSIBLE PARTY	MEASURABLE GOAL
A-K	Subwatershed Website	Hosted by CRWC website; features subwatershed map, photos, description, events and links to education resources. MS4 permittees will provide links to the CRWC website of their own websites.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Continuous	MS4 Permittees	Provide working links to Web sites
A-K	Community Information	Write or distribute articles about watersheds, stormwater pollution personal action for publication into existing municipal newsletters, enewsletters and websites; Four articles per year will be given to MS4 permittees from CRWC for publication in newsletters and other publications. MS4 permittees will distribute these article to the public each year via print or digital media.		Citizens including the general public and county and municipal employees	x	x	x	x	x	x	x	x	x	x	x	Annually	MS4 Permittees	Publish via print or digital media 4 articles per year.
A,C,G	Household Hazardous Waste Information	Continue to publicize information on the NO HAZ, Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) and Southeastern Oakland County Resource Recovery Authority (SOCRRA) programs to citizens and employees of Oakland County on WRMD's Web site ( <a href="http://www.oakgov.com/waste/nohaz">www.oakgov.com/waste/nohaz</a> ). NO HAZ, RRRASOC and SOCRRA provide safe disposal of household hazardous waste to Oakland County municipalities to the maximum extent practicable (as budget allows). Oakland County MS4 permittees will also promote.  The WRC will continue to distribute HHW brochures.		Residents	x		x				x					Continuous	MS4 Permittees	Provide working links to Web sites
A,G	Recreational Vehicle Waste Dumpsites	Post links and/or locations to recreational vehicle (RV) waste dumpsites in the region on Southeast Michigan Council of Government's (SEMCOG) Ours to Protect Web site at: <a href="http://www.semco.org/OursToProtect_HouseholdWaste.aspx">www.semco.org/OursToProtect_HouseholdWaste.aspx</a> or provide a link to Michigan RV dump sites ( <a href="http://www.rvdumps.com/mi.htm">www.rvdumps.com/mi.htm</a> ) on Oakland County Waste Resource Management Division's Web site at: <a href="http://www.oakgov.com/waste/">www.oakgov.com/waste/</a> . MS4 may add this to thier SWMP		Residents, visitors to the area	x						x					Continuous	MS4 Permittees	Provide working links to Web sites
A-J	Riparian Information Distribution	Distribute riparian landowner educational material (i.e. Waterfront Wisdom brochure) make available to their public via mailings or through their website. events, meetings, and through mailings. MS4 may add this to thier SWMP  Maintain WRC's riparian education Web site ( <a href="http://www.oakgov.com/riparian">www.oakgov.com/riparian</a> )		General Public, Riparian Landowners	x	x	x	x	x	x	x	x	x	x		Continuous	MS4 Permittees	Provide working link to Web site

# Appendix 6

# Macomb Township Municipal Separate Storm Sewer System Map



## LEGEND

- Macomb Township Storm Water Outfalls
- ① Macomb Township Civic Center  
54111 Broughton Road  
Section 9, Macomb Township  
S. of 25 Mile Road, W. of Broughton Road
- ② Macomb Township Fire Station #1/Old Township Offices/Activities Center  
19925 - 23 Mile Road  
Section 16, Macomb Township  
N. of 23 Mile Road, E. of Romeo Plank Road
- ~~③ Macomb Township Water & Sewer Department  
51560 Card Road  
Section 14, Macomb Township  
N. of 23 Mile Road, E. of Card Road~~
- ④ Macomb Township Fire Station #2  
17800 21 Mile Road  
Section 32, Macomb Township  
S. of 21 Mile Road, W. of Romeo Plank Road
- ⑤ Macomb Township Fire Station #3  
47111 North Ave.  
Section 26, Macomb Township
- ⑥ Macomb Township Fire Station #4  
16820 25 Mile Road  
Section 8, Macomb Township
- ⑦ Waldenburg Park  
Section 28, Macomb Township, N. of 21 Mile Road
- ⑧ Macomb Corners Park
- ⑨ Pump Station #2. SW corner of  
North Avenue and 21 Mile Road

Not located within Urbanized Area and therefore not regulated under this permit.

Note: Storm sewer and outfall maps for each site are retained at the Macomb Township Water and Sewer Department.

# **Appendix 7**

**MACOMB TOWNSHIP  
OUTFALL AND POINT OF DISCHARGE INSPECTION**

**GENERAL**

Date \_\_\_\_\_ Time \_\_\_\_\_ Air Temp. \_\_\_\_\_  
 Outfall No. \_\_\_\_\_ Weather Conditions \_\_\_\_\_  
 Location \_\_\_\_\_  
 Personnel \_\_\_\_\_

**PICTURES**

Site                      Image File Numbers \_\_\_\_\_  
 Outlet

**OUTLET TYPE**

Pipe:            Size \_\_\_\_\_  
 Ditch  
 Other:    Specify \_\_\_\_\_

**PRESENCE OF FLOW**

Dry Weather Flow Not Present (Inspection Complete)       Dry Weather Flow Present (Insufficient for Sampling)  
 Standing Water, Sample Not Taken                               Dry Weather Flow Present & Sample

**OBSERVATIONS** (if "other" checked fill in description in comments)

<b>Odor</b>	<input type="checkbox"/> None	<input type="checkbox"/> Musty	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rotten Egg	<input type="checkbox"/> Gas	<input type="checkbox"/> Oil	<input type="checkbox"/> Other
<b>Color</b>	<input type="checkbox"/> Clear	<input type="checkbox"/> Light Brown	<input type="checkbox"/> Dark Brown	<input type="checkbox"/> Green	<input type="checkbox"/> Gray	<input type="checkbox"/> Black	<input type="checkbox"/> Other
<b>Turbidity</b>	<input type="checkbox"/> Clear	<input type="checkbox"/> Slightly Turbid	<input type="checkbox"/> Moderate Turbid	<input type="checkbox"/> Highly Turbid	<input type="checkbox"/> Opaque	<input type="checkbox"/> Other	
<b>Floatables</b>	<input type="checkbox"/> None	<input type="checkbox"/> Trash	<input type="checkbox"/> Sewage	<input type="checkbox"/> Green Scum	<input type="checkbox"/> Oil Sheen	<input type="checkbox"/> Other	
<b>Deposits/ Stains</b>	<input type="checkbox"/> None	<input type="checkbox"/> Mineral	<input type="checkbox"/> Sediment	<input type="checkbox"/> Oily	<input type="checkbox"/> Grease	<input type="checkbox"/> Other	
<b>Vegetation</b>	<input type="checkbox"/> None	<input type="checkbox"/> Normal	<input type="checkbox"/> Excessive	<input type="checkbox"/> Algae	<input type="checkbox"/> Other		
<b>Structural</b>	<input type="checkbox"/> Normal	<input type="checkbox"/> Cracking	<input type="checkbox"/> Spalling	<input type="checkbox"/> Corrosion	<input type="checkbox"/> Settlement	<input type="checkbox"/> N/A	<input type="checkbox"/> Other

**Comments** \_\_\_\_\_  
 \_\_\_\_\_

**FIELD ANALYSIS**

Ammonia \_\_\_\_\_ Fluoride \_\_\_\_\_  
 Detergents \_\_\_\_\_ pH \_\_\_\_\_



# **Appendix 8**

**MACOMB TOWNSHIP**

PROJECT NAME:	
REVIEW JOB NO.:	
DATE:	

**ENGINEERING REVIEW ITEM CHECKLIST**

Before final approval of engineering plans is issued by this office, the items checked Y (YES) below must be submitted to our office for review:

Required		Date Received	Permit Number	Item Description
Yes	No			
<input type="checkbox"/>	<input type="checkbox"/>			Copy of Macomb County Soil Erosion approval and/or permit
<input type="checkbox"/>	<input type="checkbox"/>			MDEQ N.P.D.E.S. Notice of Coverage documentation
<input type="checkbox"/>	<input type="checkbox"/>			Copy of Macomb County Department of Roads approval and/or permit
<input type="checkbox"/>	<input type="checkbox"/>			Copy of Michigan Department of Transportation approval and/or Permit
<input type="checkbox"/>	<input type="checkbox"/>			Right-of-way dedication received and recorded with MCDOR (or MDOT)
<input type="checkbox"/>	<input type="checkbox"/>			Copy of Office of the Macomb County Public Works Commissioner (Drain Office) approval and/or County Drain Tap permit
<input type="checkbox"/>	<input type="checkbox"/>			Copy of State (MDEQ) Construction permit where public <b>water main</b> construction is proposed. <b>DATE SENT:</b> _____
<input type="checkbox"/>	<input type="checkbox"/>			Copy of State (MDEQ) Construction permit where public <b>sanitary sewer</b> construction is proposed. <b>DATE SENT:</b> _____
<input type="checkbox"/>	<input type="checkbox"/>			All necessary easements. Easements must be on Macomb Township Standard easement document and include a sketch. A current title policy for ownership verification shall be provided with all executed easement submittal(s) to this office.
<input type="checkbox"/>	<input type="checkbox"/>			Township Fire Department approval for hydrant locations, fire lane, building hook up(s), and separate water service line for fire use (as necessary)
<input type="checkbox"/>	<input type="checkbox"/>			Macomb County Health Department approval of well water supply
<input type="checkbox"/>	<input type="checkbox"/>			Macomb County Health Department approval of on-site subsurface sewage disposal system
<input type="checkbox"/>	<input type="checkbox"/>			MDEQ Permit for all proposed work in 100-year flood plain
<input type="checkbox"/>	<input type="checkbox"/>			MDEQ Drain Tap permit
<input type="checkbox"/>	<input type="checkbox"/>			MDEQ Drain Work permit
<input type="checkbox"/>	<input type="checkbox"/>			MDEQ Review of Preliminary Plat
<input type="checkbox"/>	<input type="checkbox"/>			Operation & Maintenance Agreement for _____
<input type="checkbox"/>	<input type="checkbox"/>			Site Development Bond Estimate for all developments
<input type="checkbox"/>	<input type="checkbox"/>			Other _____

The above listed items are required for approval of this particular project, but are not necessarily conclusive.

# **Appendix 9**

# Catch Basin Cleaning Activities Guidance Document

## Catch Basin Cleaning Activities

Catch basins are included in storm sewer system designs in order to remove solids such as gravel, sand, oils, and organic material carried by storm water. Catch basins also contain elevated concentrations of metals (attached to the solids) from street runoff or drainage from industrial, commercial and residential properties. In order to maintain the storm sewer systems effectiveness, catch basins must be periodically cleaned out. The Department of Environmental Quality (DEQ) Water Bureau (WB) and Waste and Hazardous Materials Division (WHMD) oversee environmental regulations pertaining to this activity. The Michigan Occupational Safety and Health Administration ([MIOSHA](#)) within the Department of Labor and Economic Growth oversee confined space entry and other worker health and safety standards.

In the past, the waste generated from the catch basin cleaning activities was typically discharged back into the storm sewer system. This type of discharge is unauthorized per [Part 31, Water Resources Protection \(Part 31\) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended \(NREPA\)](#) and is therefore illegal. The combined solid and liquid waste stream (solid/liquid waste) from cleaning storm sewers systems is legally defined as “liquid industrial waste” pursuant to [Part 121, Liquid Industrial Wastes \(Part 121\) of NREPA](#).

The following are options recommended to properly deal with the waste stream generated from catch basin cleaning activities:

1. Have the waste transported to drying beds to separate the solid/liquid waste. This is usually performed at a publicly owned treatment plant or at a privately owned permitted facility where the liquid portion of the waste stream is separated from the solids and treated.
2. Request permission from the local wastewater treatment plant operator to discharge the combined solid/liquid waste into the sanitary system. Most treatment plants will require pre-treatment prior to the discharge. All applicable local ordinance provisions must be followed.
3. When conducting catch basin maintenance activities where the above options are not available, the following method can be used as long as there are no discharges to surface waters during dry weather conditions.

- Conduct visual inspection to ensure the water in the sump has not been contaminated. If necessary, collect a grab sample of the water and look for signs of contamination such as visible sheen, discoloration, obvious odor, etc. See the EPA [Visual Inspection](#) guidance for more tips. If there is any doubt of the quality of the water, it should be collected into the Vactor truck and treated as waste under Part 121 or [Part 115 Solid Waste Management \(Part 115\) of NREPA](#).
- Using a sump pump, or any other pumping mechanism, remove the majority of water in the sump of the basin without disturbing the solid material below. Do not use pumps connected to the Vactor truck's holding tank.
- The clear water may then be directly discharged to one of the following:
  - Sanitary system (with prior approval from local sewer authority)
  - Curb and gutter
  - Back into the storm sewer system as long as it is contained within the system during dry weather condition to ensure no discharge into surface water
  - Applied to the ground adjacent to the catch basin (evenly distributed at a maximum rate of 250 gallons/acre/year)
- The remaining liquid/solid in the sump should be collected with a Vactor truck and disposed of off-site in accordance with Parts 115 or 121.

The entity whose catch basin is being cleaned is responsible for meeting the generator requirements under Part 121. See the [Liquid Industrial Waste Generator](#) guidance for more information.

The entity transporting the solid/liquid waste must meet the applicable transporter requirements. A local, state, or federal government may use its own vehicle to service catch basins or other parts of the sewer system without being a permitted and registered transporter under the provisions of the [Hazardous Materials Transportation Act, 1998 PA 138, as amended \(HMTA\)](#).

If the local government contracts with a private company to transport the liquids generated from cleaning the catch basins or other parts of the sewer system, that entity must be registered and permitted as a uniform liquid industrial waste transporter under the provisions of HMTA.

The transporter must notify the WHMD about their activity and obtain a site identification number. Follow the instructions and links to the form EQP5150 and online paying option posted at [www.deq.state.mi.us/wdsp](http://www.deq.state.mi.us/wdsp). There is a fee.

A [uniform hazardous waste manifest](#) must accompany the load, or a consolidated manifest may be used per [Operational Memo 121-3](#), when the liquid waste is transported over public roadways by the local government or by a contract transporter. Keep the records at least three years from shipment. The waste transporting portion of the vehicle and/or containers used to

transport the waste must be kept closed except when adding or removing the waste, and the exteriors must be kept free of the liquid waste and residue.

The facility accepting the solid/liquid waste must meet operating requirements:

- They must notify the WHMD that they are operating a liquid industrial waste designated facility, obtain a site identification number, and meet operating requirements under Part 121. This includes practices to prevent unauthorized discharge of the waste, sign manifests, and keep required records. If waste containers are used, they must be kept closed and protected from the weather, fire, physical damage and vandals.
- The discharge of the liquids into the treatment plant that is permitted by the WB must meet the wastewater treatment plant requirements. Any other discharge of the liquids would require a separate DEQ discharge permit.
- The resulting solid waste must be managed under Part 115 requirements. Dispose of the solid waste in a licensed landfill. Contact the landfill authority for their specific disposal requirements, including any tests they require to document the solids are not hazardous or liquid waste. Do not use the solids as fill on local government or private property, or for any other use, unless it meets the conditions of being an inert material according to the solid waste rules [R299.4114 through R299.4118](#). See the [Waste Characterization Guidance](#) for information how to determine if the waste is hazardous or not.

Street sweeping activities are also subject to the above solid waste requirements. Street sweeping involves the use of specialized equipment to remove litter, loose gravel, soil, pet waste, vehicle debris and pollutants, dust, de-icing chemicals, and industrial debris from road surfaces. See the BMPs for [Street Sweeping](#) and [Parking Lot and Street Cleaning](#).

<b>Follow-up Answers Can be Found as Follows:</b>	
<b>Topic</b>	<b>Contact:</b>
Using the solids as fill or other use under Part 115	Duane Roskoskey at 517-335-4712
Part 121 transportation requirements and HMTA	<a href="#">WHMD District Office</a>
Managing waste under Part 31, or general questions regarding this guidance	Mark Fife at 517-241-8993
Confined space entry requirements	MIOSHA Consultation, Education and Training Division at 517-322-1809

# **Appendix 10**

# Contractor Acknowledgement Form of Macomb Township Pollution Prevention and Good Housekeeping Requirements



Macomb Township is subject to a permit for discharge of storm water to surface waters of the state from municipal separate storm sewer systems. This permit is administered by the State of Michigan under the National Pollutant Discharge Elimination System requirements. As a condition of this permit, Macomb Township has developed Pollution Prevention and Good Housekeeping requirements and must oversee that contractors hired by the Township, which have potential to discharge pollutants to waters of the State, complete activities in such a way that are in compliant with these standards. By signing below, the contractor acknowledges that they have read and understand the Township's Pollution Prevention and Good Housekeeping requirements and will perform their operations in accordance with the requirements.

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(Contractor)

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(Signature of officer of company)

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(Printed Name)

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(date)